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ABSTRACT

Summarizing more than 800 reports of reading research identified between July 1, 1987, and June 30, 1988, this book categorizes the research studies into six major areas, five of which have been further subcategorized, with the majority of studies classified into the physiology and psychology of reading area. The major areas are as follows: (1) summaries of reading research (a listing of other general bibliographies of reading research); (2) teacher preparation and practice; (3) sociology of reading (the largest subcategory here being concerned with the content analysis of printed materials); (4) physiology and psychology of reading (large subdivisions here are comprehension research and factors related to reading disability); (5) the teaching of reading (with testing the largest subcategory); and (6) reading of atypical learners. A list of journals monitored for the summary and an author index conclude the book. (SR)

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Summary of Investigations Relating to Reading

July 1, 1987
to
June 30, 1988

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Editor

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Annual Summary of Investigations Relating to Reading

July 1, 1987 to June 30, 1988

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Dr. Helen M. Robinson: A Dedication

For a few fortunate souls among us, it is possible to cite one rare individual who has influenced to a great extent our thinking and the direction our professional life has taken. Dr. Helen M. Robinson was such a person in my life. She died on June 29, 1988, leaving behind a rich legacy of productive and professional accomplishments. She also left behind a deep void in the lives of those who knew her. This issue of the annual summary is dedicated to Dr. Robinson. It is written from the viewpoint of someone very directly involved, thus there will be some personal reminiscing. Rather than dwell on the accomplishments and honors, and they are many, I will focus primarily upon a few of her qualities that most influenced me and others.

As a beginning assistant professor at what is now Case-Western Reserve University, I sensed a real need for knowledge about the remedial aspects of reading. In order to satisfy that lack in my professional preparation, I wrote to a friend asking for suggestions about places where I might do post-doctoral study. I was referred to Dr. Robinson at the University of Chicago. I wrote to her, inquiring about the possibility of studying there and received a prompt and encouraging reply with an invitation to visit the university. I did so and met a warm and gracious Dr. Robinson. Offered a post-doctoral research associate's appointment, I readily accepted and moved to Chicago at the end of my first year of college teaching.

At Chicago, I was assigned duties in the Reading Clinic which was then undergoing a change in directors. In addition to serving as a general assistant in the clinic and learning what I could there, I also audited courses with Helen K. Smith, H. Alan Robinson, and, of course, Helen Robinson. Included in those audited courses was a series of three doctoral research seminars taught by Dr. Robinson and a twice-a-month evening research seminar open by invitation to faculty and former and current students. It was a heady experience for a young person. Dr. Robinson's research seminars proved a revelation. She exemplified for me what a teacher should be. She helped students grow in the ability to read and react critically to research, she implanted the desire to learn more, she helped broaden the knowledge base of what constituted the dimensions of the field, she opened up unexplored and unthought of ideas, and she instilled a healthy respect for the need to know what had gone on before in order to build rather than to rediscover. All this was done with a lucidity, wisdom, and insightfulness I grew to appreciate increasingly because of its rarity. The doctoral research seminars were offered in alternate years. I sat in on them each time they were offered (a total of four times altogether), and each time I learned more.

Dr. Robinson pushed her students but never to the point where they despaired. She refused to accept less than their best work, but she also refused that of herself. Frequently, I watched her agonize over a talk or a piece of writing until she had it "right." I recall that she fretted over her update of Gray's model of reading, mulling it over in her mind for several months in spare moments until she realized that she wanted to include rates as part of it and to present it as a skills model rather than a process model.

Among Dr. Robinson's many strengths was the ability to organize. With her sharp, incisive mind, she could bring organization and clarity out of a mass of sometimes incomprehensible material so that some sense would be made of it. Moreover, she was able to communicate what she found to classroom teachers and other practitioners with a clarity that few others possess.

Upon William S. Gray's death, Dr. Robinson took over responsibility for preparing the annual summaries, along with a great many other tasks. Those who wish may go back and trace the development of the summaries. In doing so, they would be able to identify a change in the organization of the summaries soon after Dr. Robinson took over as author. Her organizational skills were employed in the development of subcategories for the research abstracts, one of many improvements she made in the summaries. The categories she developed are still in use and still appropriate. Through her administrative and organizational competencies, I learned to expect that meetings should begin on time, stay on the topic, and accomplish the designated task. Often I've regretted having come to expect that of others, because I've so frequently been disappointed!

Her receptiveness to new ideas and her ability to see their potential were equally as impressive as her organizational skills. I remember quite vividly sitting next to her at an IRA Annual Conference and complaining that I'd heard what the speaker had said before. She replied something to the effect that the speaker had organized the research in a different way and, in doing so, had made a very real contribution. She was correct. The speaker had produced a unique way of organizing and synthesizing the literature, something that had not been done with the topic before. Dr. Robinson recognized it immediately and realized its worth. At another time when I was criticizing a newly produced reading program and noted that I failed to see what it was doing for children, she pointed out to me the possible contributions. Let me add that it was a program with whose tenets she did not concur completely. Even so, she saw the potential that parts of it might have. That remarkable ability not to disregard a piece of research or an idea because some parts of it might be flawed was characteristic of her. Even though she might disagree quite strongly with what an author or researcher was saying, if there was a germ of a worthwhile procedure, idea, or finding in the text, she could find it and value it. Too few among us are able to do that.

Dr. Robinson, Emmett Betts, Donald Durrell, and Nila Banton Smith were the original members of the Reading Hall of Fame. It seems fitting that Dr. Robinson served as the first president-secretary of the group. Fitting because of her eminence in the field and fitting because of the respect that her peers held for her. On more than one occasion I watched in awe when she entered into a discussion with a group of leaders in the field. Invariably, they would listen with marked deference to what she had to say. Unquestionably William S. Gray's best known student, she called him her professional father and held him in great regard. Indeed her last professional presentation was a tribute to Gray in 1985 on the one hundredth anniversary of his birth. She came out of retirement to honor Dr. Gray. Her retirement was self-imposed. She felt that she was no longer current with the field and did not wish to present something that would have been unworthy of her best work. That she not embarrass herself or her profession was a real concern and, again, typical. More than once she stated that she hoped someone would tell her if she were beginning to sound foolish or out-of-date. No one ever had to.

Few people were better able to synthesize and apply research findings than Dr. Robinson. As a major author of a basal reading series, she realized that it was time to move from a traditional program and pushed the publisher to do so. In that move, she attempted to incorporate the best of what she could identify in the research literature. Others have referred to that series as being ahead of its time. The work on the basal program was always viewed as a different dimension of her life, and she tried to separate it from her other professional accomplishments. To a considerable extent she was able to do that. She recognized it as a contribution, but never conceived of it as equal to her research, her teaching, or her work with doctoral students.

Dr. Robinson's work with her doctoral students took precedence over almost everything else. Among the first six recipients of IRA's Outstanding Dissertation Award were three of her students. No doubt there would have been more had she not retired in 1968. The list of names of those who either studied with her or whose dissertations she chaired is long and eminent. At least two former students, Marion Jenkinson and Helen K. Smith, are members of the Reading Hall of Fame. No doubt others will be in time. She considered her students one of her major contributions. Several years ago, I asked her to meet with a group of doctoral students in the program at Buffalo. She willingly donated her time and held them enthralled with her insights into research in the field. In particular, I asked her to discuss her own dissertation research which had resulted in *Why Pupils Fail in Reading*. Her weavings of how she came to identify the problem, of the difficulties and tribulations in carrying it out, and of what she felt were the weaknesses in it undoubtedly proved the high point in the educational experiences of many of the doctoral students who heard her.

Always organized, Dr. Robinson requested that anyone wishing to make a contribution in her name do so to IRA. To that end, the Helen M. Robinson Fund has been established by IRA and anyone desiring to do so may send a contribution to IRA made out to the fund. Its purpose is yet to be determined, but it will be in keeping with Dr. Robinson's keen interest in research and in doctoral students.

Hers was a long and illustrious career. Her first publication appeared in 1929; her last, in 1985. But beyond the writing and the research was the person. She touched many lives. For those many and for myself, I can only say:

We miss you, Dr. Robinson.

Sam Weintraub

A microfiche edition of this *Annual Summary of Investigations Relating to Reading* is available. Annotated citations are provided in author and subject sequences on eye-readable, 4 x 6 cards; the full-text documents are reproduced on 4 x 6 high-quality microfiche which utilizes an exclusive image indexer. Printed author and subject indexes are included, and a demonstration workshop is available to train staff and students in the use of the collection. For further information about the microfiche edition of this *Annual Summary* or any previous *Summary*, contact the Alvina Treut Burrows Institute, PO Box 49, Manhasset, NY 11030 516-869-8457.

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The International Reading Association attempts, through its publications, to provide a forum for a wide spectrum of opinions on reading. This policy permits divergent viewpoints without assuming the endorsement of the Association.

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Annual Summary of Investigations Relating to Reading

*July 1, 1987 to June 30, 1988**

SUMMARIZES more than 800 reports of reading research identified between July 1, 1987, and June 30, 1988. The research studies are categorized into six major areas, five of which have been further subcategorized. As in previous years, the majority of studies reported were classified into the Physiology and Psychology of Reading area. Large subdivisions within that category are Comprehension Research and Factors Related to Reading Disability. The largest subcategory in the Sociology of Reading is concerned with the content analysis of printed materials. Under the Teaching of Reading category, the subcategory Testing remains the largest. A listing of other general bibliographies of reading research appears as the first major category of the present summary.

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*Ellen Friedland, a doctoral student at SUNY/Buffalo, is responsible for identifying the materials for inclusion. Margaret Collins is the efficient secretary who keeps track of all the summary materials and is responsible for seeing that everything functions smoothly. To both of those people, I am deeply indebted. In addition, thanks are due to our responsible, conscientious work-study student, Crystal Huston. Primary financial support of the annual summary is provided by the International Reading Association. Supplementary funding is supplied by the Alvina Treut Burrows Institute, Inc.

I. Summaries of reading research

Developmental Medicine & Child Neurology. Section on Disorders of Communication and Hearing. Bibliography of Developmental Medicine & Child Neurology: Selected Books and Articles Received in 1986. April 1987, *29*, 58-63.

Includes citations to recent journal articles all dealing with communication and hearing disorders. Included are articles on reading and learning disabilities.

DURST, RUSSEL K., & MARSHALL, JAMES D. Annotated bibliography of research in the teaching of English. *Research in the Teaching of English*, December 1987, *21*, 422-443.

Contains an annotated bibliography of research in the teaching of English. Connotations appear under four major headings: (1) Writing, (2) Language, (3) Literature, and (4) Teacher Education. Books, papers, journal articles, ERIC documents, and references from *Dissertation Abstracts International* are included.

GOODACRE, ELIZABETH. Reading research in Great Britain—1985. *Reading*, April 1987, *21*, 16-29.

Summarizes reading research in Great Britain in 1985. Major headings are: (1) Reading standards and tests, (2) Reading development, (3) Dyslexia and specific reading retardation, and (4) Reading materials and interests. A complete list of references follows.

GOODACRE, ELIZABETH J. *Reading Research Review 1985.* Reading, Berkshire: University of Reading, School of Education, 1987.

Identifies, summarizes, and abstracts reading research reported in Great Britain in 1985. In the first section, the author summarizes the research under four main headings: Reading Standards and Tests, Reading Development, Dyslexia and Specific Reading Retardation, and Reading Materials and Interests. In the second section, articles on reading research are cited and abstracted. A third and fourth section give citation information and abstracts on articles and books, respectively, on reading.

GOODACRE, ELIZABETH J., & BENTLEY, DIANA. *British Register of Reading Research, No. 12.* Reading, Berkshire: University of Reading, School of Education, 1987.

Continues the annual register of British reading research. Sections listing ongoing research and completed research give the author, title, institution, dates, and type of research (master's, doctoral, funded). Abstracts of some 49 completed studies are then presented.

GREANEY, VINCENT. Reading: How are we doing? *Irish Papers Presented at Fourth European Reading Congress and Tenth Annual Conference of the Reading Association of Ireland*, 1985, 201-240.

Reviews published research on reading in the Republic of Ireland. The article begins with a brief historical focus leading to recent developments. General topics reviewed are: teaching methods, textbooks, assessment, remedial reading, reading and the disadvantaged, library resources, correlates of reading performance, and standards of reading. An extensive bibliography is included.

HLADCZUK, JOHN, & ELLER, WILLIAM (COMPILERS). *Comparative Reading: An International Bibliography.* Westport, CT: Greenwood Press, 1987.

Lists bibliographic entries under two major areas: International Research and Correlates of Reading. International Research listings appear under the three divisions of Cross-Cultural Research, World Regional Research, and National Research. Correlates of Reading entries are found under 10 headings.

Marshall, James D., & Durst, Russel K. Annotated bibliography of research in the teaching of English. *Research in the Teaching of English*, May 1988, *22*, 213-227.

Continues the compilation of an annotated bibliography on research in the teaching of English. The same subdivisions appear as in previous bibliographies under this title.

Weintraub, Sam; Smith, Helen K.; Roser, Nancy L.; Moore, Walter J.; Kibby, Michael W.; Jongsma, Kathleen S.; Jongsma, Eugene A.; & Fisher, Peter J.L. in Weintraub, Sam (Ed.) *Summary of Investigations Relating to Reading, July 1, 1986 to June 30, 1987.* Newark, DE: International Reading Association, 1988.

Identifies and abstracts approximately 900 published research reports in reading. The literature is categorized under 6 major categories. Five of the categories are further subcategorized.

II. Teacher preparation and practice

II-1 Behavior, performance, knowledge, practices, effectiveness

Stice, Carole F., & Call, Terese F. *The Test* may have become *The Curriculum. Tennessee Reading Teacher,* Spring 1988, *15*(2), 11-16.

Reports a series of classroom observations made in grades 1 to 6 in three Tennessee public schools. Of particular interest was the influence the Tennessee basic skills list for reading had on instruction. Observations were made in 20 classrooms over a four month period. Of the total time observed (1,020 minutes), 561 minutes consisted of instructional time and 459 minutes of noninstructional time which included such things as attending to discipline, passing out papers, and taking care of class business. Of the instructional time, oral reading and comprehension questions accounted for 28%, teacher-directed phonics activities 46%, and word meaning or structural analysis tasks 26% of the time. A total of 73% of the seatwork time was devoted to workbooks and worksheets. No evidence of the use of children's literature was observed and virtually no time was spent on writing activities.

Daines, Delva. Are teachers asking higher level questions? *Education*, Summer 1986, *106*, 368-374.

Describes the patterns of questioning employed by 38 teachers of 2nd, 4th, 6th, 8th, 10th, and 12th grades during their social studies instruction. Teachers' questions and students' answers were recorded using a portable microcomputer, which recorded the lapse time between the end of a question, the beginning of an answer and the duration of the answer. The sequential verbal statements by the teacher after they posed questions and after students completed their answers were also recorded. Seventy-five hours were spent in observing 143 lessons. Of the questions teachers asked (n=5,289), 93% were at the literal level of comprehension, approximately 7% were interpretive, and less than 1% were affective. The fourth category of coded questions, Application, was not posed. Teachers asked an average of 78 questions per hour or 1.3 per minute. The number of questions differed depending on the mode of presentation, with fewer questions asked per minute during lectures and more during checks of comprehension and memory. Discussion was used in almost one-half of the lessons. Two seconds was the average wait-time between the end of questions and the responses of students, regardless of the level of question asked. Three seconds was the average duration of the students' answers to literal questions; the length of their responses increased when interpretive questions were asked. Of the 5,258 responses to questions, 88% were at the literal level, 6% were at the interpretive level, and students indicated they were unable to answer 6%

of the questions. The rank order of frequency of the teachers' verbal patterns before the students answered the teachers' questions were restatement of the question, answering the question themselves, and rephrasing the question. After students answered questions, the teachers most frequently repeated the answers, followed by (in rank order) asking for additional responses, giving praise for the answers, rejecting or correcting answers, and asking for repetitions. Teachers spent twice as much time giving instruction as they spent in nonacademic activities.

SHAKE, MARY C. Teacher questioning: Is there an answer? *Reading Research and Instruction*, Winter 1988, *27*(2), 29-39.

Investigates whether questions asked during second-grade reading lessons display different trends depending upon the comprehension taxonomy employed for their classification. Data obtained from a 1985 study of second-grade reading lessons in six classrooms were reanalyzed. Written transcripts of 35 videotaped lessons of high, average, and low reading groups were analyzed in two ways: (1) questions related to the story were classified using Barrett's Taxonomy, and (2) both the questions and pupil responses were analyzed according to the three levels of Pearson and Johnson's Taxonomy of question-answer-relationships (QARs). When categorized according to Barrett's Taxonomy, 52% of the questions teachers asked were labeled as Literal Comprehension (recognition, recall, and reorganization), while 23% were labeled as Inferential and 24% as Evaluation and Appreciation. However, when the questions were coded using Pearson and Johnson's system of QARs, the greater percentage of questions (41%) were labeled as Scriptally Implicit, 31% were categorized as Textually Explicit, and 28% as Textually Implicit. It was noted that because of teachers' spontaneous rephrasing of questions before children had a chance to respond, only 61% of the total questions posed could be categorized using the Pearson-Johnson Taxonomy. When the types of questions asked of each ability group were examined, it was evident that the poorer readers were asked the highest percentage of lower level questions. Because of the more evenly distributed percentages across taxonomic categories for the Pearson and Johnson system, it was concluded that readers frequently respond to literal level comprehension questions by integrating text information and/or drawing on background experiences. Twenty-one percent of the total questions addressed to the students were categorized as manual-based, either directly stated or paraphrased. Teacher manual questions that were included in the transcripts tended to be lower level, again with most readers asked a greater percentage of Literal Comprehension or Textually Explicit manual-drawn questions. Only high-level readers, when QARs were classified using the Pearson and Johnson Taxonomy, had a greater percentage of Scriptally Implicit questions.

WIESENDANGER, KATHERINE D. Durkin revisited. *Reading Horizons*, January 1986, *26*, 89-98.

Duplicates Durkin's sub-study analyzing teacher activities and instructional procedures during the reading period. Observed were 20 teachers, all of whom had been in a reading course in which the distinction between testing and teaching comprehension had been covered. At least three observations were made in each fourth-grade classroom for a total of 150 minutes. The largest percentage of time, 14.81%, was spent on comprehension instruction; 9.94% was spent on assessment.

MORRIS, ROBIN H., & FAGAN, WILLIAM T. The relationship between questioning behavior and theoretical orientation to reading comprehension instruction. *Reading-Canada-Lecture*, Summer 1987, *5*, 76-83.

Observes and compares differences in the questioning behavior of skills/eclectic versus whole language oriented teachers while teaching reading. Based on responses to a 20-item Likert scale questionnaire, three fifth-grade teachers were identified as having a whole language orientation and three as having a skills/eclectic orientation to reading. Three comprehension lessons were observed and taped for each teacher. Each teacher then chose the two lessons which best represented his/her regular comprehension instruction, and questions were coded and analyzed. A total of 1,357 questions was asked, with whole language teachers asking 19% more questions than skills/eclectic teachers. The proportion of instruction questions was 11% for whole language teachers and 6% for skills/eclectic teachers. Assessment type questions were slightly over 55% for both groups. The remainder of the questions for both groups were for behavioral or procedural purposes. Whole language teachers tended to ask more clarification questions, while skills/eclectic teachers asked more vocabulary questions. Just over half the questions for each group were scriptally implicit. Whole language teachers showed greater interaction with pupils and frequently engaged pupils in expressing their opinions and sharing their feelings.

FARREN, SEAN. Critical reading—how seriously do we take it? *Proceedings of the Ninth Annual Conference of the Reading Association of Ireland,* 1984, 26-41.

Details results of a questionnaire survey about the assistance or guidance provided by teachers in order to help students carry out assignments. Participants were 22 secondary teachers representing English, social studies, and general science. Six forms of assistance and a "no assistance" response were listed for teachers. The most frequently identified form given was an explanation of difficult or specialist terms, 31.5%, followed by an explanation of assignment aims, 25.5%. Results were then broken down by the three content areas. In English, most frequently checked was an explanation of assignment aims (32.2%), with an explanation of difficult or specialist terms (23.7%) next most frequent. In social studies, the vocabulary explanation constituted almost one-third of the responses checked. For the general science area, explanation of terminology constituted 46.4% of the forms of assistance checked as given, and an explanation of assignment aims accounted for 39.3% of the total assistance given.

PERRIN, MARGARET L., & COKER, DONALD R. Accommodation of student learning styles in elementary classrooms. *Reading Improvement,* Summer 1986, *23,* 142-144.

Investigates the extent to which elementary teachers accommodated various pupil learning styles during classroom instruction. Thirty-seven Texas elementary teachers in grades 1, 3, and 5 were observed during reading instruction and their efforts at accommodation recorded. The total observation time for all teachers was over 60 hours. Observations were guided by the *Learning Styles Observation Record,* a 34-item instrument designed for collection of teaching styles that accommodate learning differences. To score 100%, a teacher must exhibit 34 different types of accommodation to learning styles. Scores ranged from 7 to 24, with a group mean score of 15.64 (S.D. = 4.6). Data were divided into demographic subgroups of: (a) the teacher's degree level, (b) age, (c) teaching assignment, (d) length of tenure, (e) job mobility, and (f) certification level. Findings revealed that most teachers do not adjust their instructional activities to accommodate a wide variety of learning styles. First-grade teachers accommodated the learning styles of their pupils significantly more than did third or fifth grade teachers. Other demographic data for the various subgroups did not reveal significant differences among teachers in the degree to which they accommodated learning styles.

SMITH, PATRICIA K., & SALTZ, MARTIN. Teachers' reactions to the basal reading series approach. *Reading Horizons,* Summer 1987, *27,* 246-253.

Obtains, analyzes, and reports responses of 113 classroom teachers to a survey asking about their use of basal readers and concerns regarding grouping, supplementary materials, and related items. Replies were open-ended. In general, responses were favorable toward the concept of basal series, but there was a feeling that specific series did not satisfy individual needs of children. The predominant criterion for assignment to a reading group was ability. Teachers felt that higher level critical reading skills, content reading skills, and study skills needed more emphasis in basals. It was thought that most basals were integrated easily with other approaches to reading instruction.

Cloud-Silva, Connie, & Sadoski, Mark. Reading teachers' attitudes toward basal reader use and state adoption policies. *Journal of Educational Research*, September-October 1987, *81*, 5-16.

Surveys 500 Texas elementary teachers with 25 Likert-type and three open-ended questions to determine: (a) their attitudes toward basal readers as a teaching method, (b) the extent of their use of basal reader programs, (c) their perceptions of the quality of their basal readers, and (d) their attitudes about statewide reading textbook adoption policies. A proportional stratified random sample from small, medium, and large school districts was drawn statewide. Double sampling was employed, drawing a second proportional random sample of nonrespondents for comparison to the original respondents. Comparisons yielded no significant differences and revealed no nonrespondent bias. Of the 251 respondents, a large majority (98%) appeared to believe in the validity of instruction basals offer, as judged by a ranking of three or above on the five-choice scale, although 71% of the teachers reported supplementing the basal. Respondents (88%) reported using the teachers' edition "often" or more frequently. In addition, 89% of the teachers indicated moderate or greater satisfaction with their basal reader. Ratings indicated general satisfaction with word-attack instruction (66%), with suggestions offered for earlier and more phonics instruction. Ninety-two percent of the respondents indicated satisfaction or better with comprehension instruction and 81% rated the quality of the literature selections as satisfactory or better. Forty-eight percent felt the Texas textbook selection policy does a good job serving teachers, while 44% felt the process needs improvement. A clear majority (65%) stated that at least some changes are necessary. Multiple correlations were performed for each issue, using a key item as the criterion variable and the remaining items and demographic data as the predictor variables. These coefficients indicated that teacher adherence to the teachers' manual in planning had the highest correlation with basal use. The utility of the basal in teaching the state-mandated essential elements was the highest predictor of satisfaction with the basal. The degree of satisfaction with the basal was the first predictor of teachers' attitudes and perceptions about the textbook selection process.

Davey, Beth. How do classroom teachers use their textbooks? *Journal of Reading*, January 1988, *31*, 340-345.

Surveys how teachers use textbooks and compares use by elementary (n=45) and secondary (n=45) teachers. All subjects were enrolled in various graduate education courses at a large university. Teachers rated their responses to components of textbook use on a four-point scale, ranging from never used to used most of the time. In addition, they responded to open-ended questions tapping aspects of text use and attitude toward content text. Elementary and secondary teachers differed significantly in their responses on six of the 11 items in the survey. Specifically, elementary teachers more frequently reported giving class time to textbook reading, overviewing textbook selections with pupils, using different texts with different children, and changing texts if pupils couldn't read them. Secondary teachers reported more frequent use of textbook-based homework assignments and a greater expectation that students would read the total textbook. On the open-ended questions, teachers revealed that they infrequently relied on their textbooks for lectures; the largest portion of each group reported use of the text to supplement instruction. Elementary teachers noted more options for adusting textbooks than did secondary teachers, including use of a variety of sources to present content, additional vocabulary instruction, and rewriting the text. Secondary teachers most frequently mentioned using study guides and rewriting text as adjustments they could make. A relatively small portion of each group (13%) noted limitations with the texts themselves and more frequently mentioned time limitations (elementary) or student characteristics (secondary) as factors that inhibit effective use of texts. One-third of the elementary teachers reported liking their textbooks' visuals, graphics, and print. The largest portion of secondary teachers reported satisfaction with textbook content (37%). In a response to a question tapping what the respondents disliked about their textbooks, one-third of the elementary and nearly one-fourth of the secondary teachers reported disliking everything. An additional one-third of the secondary teachers reported dissatisfaction with textbook content.

BLACHOWICZ, CAMILLE L.Z. Vocabulary instruction: What goes on in the classroom? *The Reading Teacher*, November 1987, *41*, 132-138.

Looks at vocabulary instruction in 6 fourth-grade average reading groups to determine: (1) was vocabulary instruction a priority; (2) what kind of instruction took place; and (3) what shaped teacher instructional decisions. Teachers were observed in their own classrooms for 10-15 school days, 20-40 minutes per day. Each group was observed through three complete story cycles. From interview data, running records, and time allotments in the lesson, vocabulary was definitely a teacher priority. Using a strict coding of counting vocabulary time only if the teacher highlighted a word, phrase, or list, 14% of the time was spent on vocabulary. Using a definition to include general concept development, 19% was spent, and teachers' own post-lesson analyses reported 15% of their instructional time for vocabulary. Most instruction came prior to reading the selection, and 45% of the instructional time was spent on determining the meanings of words in limited context, although pupils received only minimal context instruction and modeling. Twenty-eight percent of vocabulary instructional time was spent on pronouncing words or dealing with definitions or synonyms, and 7% was spent on relating the words to other words or to the selection. Relatedness to the upcoming lesson was not emphasized, and little attention was given to development strategies for figuring out word meanings independently. Teacher allocations of time and strategies were guided by the teachers' manuals.

MARRIOTT, STUART. Teachers' use of fiction in primary schools in Northern Ireland. *Irish Journal of Education*, Summer/Winter 1986, *20*, 97-108.

Utilizes a questionnaire survey to study the use of children's fiction in the primary schools of Northern Ireland. The survey was sent to over 1,000 schools with a request that principals and teachers of P3, P5, and P7 classes respond; 376 usable questionnaires were returned. All teachers reported the use of published reading schemes (basals). Teachers were asked to identify books and short stories they considered appropriate for good, average, and poor readers in their classrooms. Fewer responses were received from teachers of younger children, some of whom replied that no such books were used. Respondents also indicated how they organized novel and story reading. Other frequently used strategies included use of a class library, group reading, class silent reading, discussion, and reading as homework. Follow up activities listed were varied, but the most commonly reported was writing book reviews.

HAGUE, SALLY A.; CHILDERS, NANCY R.; & OLEJNIK, STEPHEN. Micros and reading: What do secondary reading teachers say? *Florida Reading Quarterly*, March 1988, *24*(3), 5-10.

Reports a survey in which the intent was to ascertain how one group of reading teachers incorporated computer use into their instructional programs. The survey was mailed to 187 secondary reading teachers; 131 were returned. Forty-four percent of the respondents indicated that they could use computers if they so desired; however, of that number only 37 teachers indicated that they actually took advantage of opportunities to utilize them. Of the

37, 39% had more than five computers available for their use. Five teachers had computers available for 20 or more hours per week and were using them to the full extent of the time available. Apple computers were most widely found. Thirty teachers reported having 10 or fewer software packages available. Slightly over 60% reported that better software would lead to increased computer usage.

KLESIUS, JANELL P.; SEARLS, EVELYN F.; & HINES, CONSTANCE V. What's the value of an *IRI*? Is it being used? *Reading Horizons*, Winter 1988, *28*, 92-101.

Seeks to determine if the informal reading inventory (IRI) is used and the purposes for which it is used. Sampled were 280 classroom teachers and 63 support specialists in 11 Florida counties who responded to a three-part questionnaire. The IRI was used by 62% of respondents in initial pupil placement, basal placement tests were used by 59%, former basal book placements by 58%, and achievement tests by 35%. About three-fifths of classroom teachers reported low use of the IRI for diagnostic purposes, while about one-half of support specialists also reported low use. Just under one-fourth of each group checked high use of IRIs for diagnostic purposes. Classroom teachers who reported frequent use of the IRI valued it significantly higher than did teachers who reported using it infrequently, but only for oral reading diagnosis.

DAVIDSON, JANE. Teacher-student generated lessons: A model for reading instruction. *Theory into Practice*, Spring 1986, *25*, 84-90.

Presents a research base for a teacher-pupil generated lesson framework for reading instruction. Two groups of eighth-graders (four males and four females in each group) participated in two instructional lessons taught by the same teacher emphasizing reading and discussion of a single science text. One lesson was labeled as a teacher-manual generated lesson (TMGL) and reflected the teacher's interpretation of the text manual's suggestions for instruction. The second lesson was based on the teacher's interpretation of Stauffer's directed reading-thinking activity and was labeled as a teacher-student generated lesson (TSGL). Lessons were videotaped and transcribed. Both the teacher and children viewed the taped lessons, and their introspections were audiotaped. The analysis focused on the patterns of interaction that occurred, specifically the teacher's and pupils' questions and responses, the amount of teacher and pupil talk, points of divergence from the lesson, and pupils' concept-linking talk. Although both lessons generated approximately the same amount of teacher talk, children talked nearly twice as much in the TSGL. The majority of questions asked during the TSGL were predicting and evaluating; during the TMGL the majority of the questions were evaluative. In the TSGL, factual questions stimulated evaluative responses; during the TMGL, evaluative questions stimulated factual level responses. The number of linking-back statements made by students in the TSGL, i.e. pupil talk referring to a previously-stated concept, was nearly twice the number that occurred during the TMGL. The teacher made nearly three times as many linking-back statements in the TSGL. Further, linking-back statements appeared to serve different functions in each lesson: In the TSGL, linking-back statements were used to support children's earlier comments. In the TMGL, the teacher linked back concepts to help pupils gain understanding of the concepts and their interrelationships. The majority of teacher statements in the TMGL were explanations, interpretations, and clarification (56%). The majority of teacher statements in the TSGL were restatements (80%). Analysis of transcripts indicated that children in the TMGL were reading what they were told to read and feeding back bits of text to the teacher without making inferences about the concepts intended by the text. The pupils in the TSGL were engaged in hypothesizing, refining their hypotheses, accepting or rejecting them, and formulating new ones. Their introspections indicated more active involvement in the process of comprehension.

MOSENTHAL, JAMES H. Learning from discussion: Requirements and constraints on classroom instruction in reading comprehension strategies. In John E. Readence

& R. Scott Baldwin (Eds.) *Research in Literacy: Merging Perspectives.* Thirty-sixth Yearbook of the National Reading Conference, 1987, 169-176.

Replicates a study in which classroom teachers and school specialists, trained in the use of the reciprocal teaching strategy, effectively improved pupils' comprehension of text. The reciprocal teaching strategy engages children and teachers in the task of generating questions, summaries, requests for clarification, and predictions based on the content of a short selection. Effectiveness is determined by the quality of the interaction and through the probing that results in a response tapping relevant content. Eight junior high pupils with adequate decoding skills, but who averaged below 50% on baseline comprehension measures, were instructed using the reciprocal teaching strategy. Their teacher was instructed in the use of the reciprocal teaching strategy by the experimenter in six one-hour sessions. Over a seven-week period, children were instructed and assessed with the passages from the original study. An assessment passage of approximately 400 words followed each discussion session. Twenty-one sessions were tape-recorded and final forms of responses were coded according to which component of the strategy it was a response (question, summary, clarification, or prediction), its locus (whether it was the initial response by a pupil, a response given as the result of teacher probing, or a response modeled by the teacher), and its adequacy (whether or not the response tapped relevant content). Average comprehension performance of the group for baseline, training, and follow-up was 37, 52, and 49, respectively, below the 75% criterion set for the daily assessment task in the original study. A profile of the adequacy of student responses was calculated by determining the proportion of total student responses that were rated inadequate. Ideally, given appropriate probing, inadequate responses should approach 0%. For this replication, inadequate predictions totaled 40%, inadequate questions, 26%, and inadequate summaries, 51%. A profile of adequacy of the teacher's modeling was also calculated. For the modeled clarifications and predictions, 0% were inadequate. Eleven percent of the questions and 26% of the summaries modeled by the teacher were rated inadequate. In general, based on the proportion of inadequate final responses, it was concluded that the extent of the teacher's probing was inadequate and that the quality of the teacher's modeling of questions and summaries degenerated over the sessions.

GAMBRELL, LINDA B. Children's oral language during teacher-directed reading instruction. In John E. Readence & R. Scott Baldwin (Eds.) *Research in Literacy: Merging Perspectives.* Thirty-sixth Yearbook of The National Reading Conference, 1987, 195-199.

Investigates the oral language experiences that children have during teacher-directed reading lessons and the types of teacher cues which encourage elaboraton of oral responses. Fifteen Maryland county and Washington, D.C., teachers of grades 1, 2, and 3 were observed and tape-recorded during 41 teacher-directed reading lessons. Teacher and pupil verbalizations about the story or instructional materials were coded for analysis. The major function of children's oral language during teacher-directed reading lessons was to respond to teacher-initiated questions. Only one pupil-posed question was recorded across the 41 lessons. For first grade, only 1% of the pupil responses were beyond the sentence level; at second and third grades, only 3% were beyond the sentence level. Seventy percent of the instances of expanded responses (n=54) were due primarily to teachers' requests for children to share personal experiences, make predictions, and draw conclusions. The findings suggested that children engage in limited oral language expression about the stories and information they read during teacher-directed reading lessons.

PADAK, NANCY D., & PADAK, GARY M. Students' and teacher's perceptions of an innovative reading strategy. In John E. Readence & R. Scott Baldwin (Eds.) *Research in Literacy: Merging Perspectives.* Thirty-sixth Yearbook of The National Reading Conference, 1987, 201-208.

Explores how students' and their teacher's perceptions of reading lessons changed as the students become accustomed to participating in Directed Reading-Thinking Activities (DR-TAs). Nineteen high school students (5 males and 15 females) enrolled in an Upward Bound English class and their teacher served as subjects. The class, which met for one hour weekly, was designed to provide students with supplementary reading and writing experiences. Over a three-month period, the students read and discussed seven different short stories using a DR-TA. Following each session, students and the teacher wrote their thoughts and feelings about the story and the lesson in open-ended learning logs. Log entries for the first and third months of the programs were analyzed for changes in perceptions. The teacher's log showed similarity among all the lessons in their relative success and benefit to students. There were changes in his perceptions of two key aspects of the lessons. First, there was a perceived change in the participation structure of the lesson. The teacher's log noted more free-flowing dialogue, more students participating in the lesson over time, and increased cooperation in the discussion. Second, teacher perceptions also indicated changes in the increased sophistication of students' predictions, greater use of prior knowledge, and more substantive justifications of their answers. Although students' logs did not make reference to increased comfort making predictions or drawing upon prior knowledge, their comments about the characters and plots of the stories became more evaluative of specific elements within the stories and of story endings. Except in one case, students' written comments about the instructional procedure were favorable.

Garner, Ruth; Slater, Wayne H.; Weaver, V. Phillips; Cole, Mildred; Williams, David; & Smith, Terrie. Do pre-service teachers notice textbook flaws? *Education*, Summer 1986, *106*, 429-433.

Selects five characteristics of inconsiderate texts for intensive study: (a) a mismatch between structural signals (e.g., headings, topic sentences) and content that follows; (b) short, choppy sentences that obscure relationships among ideas; (c) irrelevant information that potentially distracts; (d) insufficient information given the probable prior knowledge of readers; and (e) lack of definitions for difficult vocabulary. Subjects were 17 female student teachers in an instructional planning seminar. Participants were given a four-page grade five level social studies text segment containing examples of inconsiderate text characteristics. Student teachers were asked to read the text three times as if preparing to use it in their classrooms and to note instances where pupils might have difficulty in comprehending the material. Subjects' marginal notes were scored for mention of the five characteristics. Only two individuals mentioned any flaws, each referring to one problem. Thus, only 2% of all opportunities for identifying inconsiderate text was noted.

Ulrich, Anna. Current issues in education in New Mexico. *New Mexico Journal of Reading*. Spring 1988, *8*(3), 7-11.

Presents results of a survey of New Mexican educators focusing on current issues in education in New Mexico. Of the 200 questionnaires distributed to at least one person in each of 88 school districts, there was a 31% rate of return. Thirty-eight percent of the surveys were completed by elementary teachers, 10% by secondary teachers, 42% by administrators, and 10% by other educational specialists. The survey addressed certification, parent involvement, computers in reading, censorship, and the education reform act. Respondents indicated the extent of their agreement with statements of educational concern on a four-point scale from "strongly agree" to "strongly disagree." Most felt that current certification standards were adequate. Survey participants agreed that children's literature other than basal texts are used both in the school district and in the classroom to teach reading. Most agreed that parents were involved in the educational process in their school districts. Responses were mixed on use of computers in reading programs. The majority strongly disagreed that the issue of censorship presented a problem in the schools. The Educational Reform Act was treated somewhat negatively by those who responded to the survey.

II-2 Beliefs/attitudes toward reading

SHANNON, PATRICK. Differing perspectives on the goals and means of reading instruction. *Reading Horizons*, Fall 1986, *27*, 69-78.

Conducts a study of views of the reading program held by school personnel in one large suburban-rural midwestern school district. A 10-item questionnaire was distributed to 421 classroom teachers, 20 reading teachers, and 20 administrators. Respondents were asked to rank order the 10 items as goals and means for an ideal school reading program. Items included five designated as affective-communal and five designated as rational-monitoring. Follow-up interviews were conducted with 20 classroom teachers, 3 reading teachers, and 3 administrators. In addition, school district pamphlets describing the reading program were examined in an effort to determine the central administration's conception of the program. Some 89% of questionnaires were returned. Principals never ranked an affective-communal item higher than fourth; reading teachers appeared to rank both perspectives equally; classroom teachers averaged three affective-communal and two rational-monitoring items in the top five. Sixty-three percent of principals felt decisions should be made at the administrative level; reading teachers split evenly between administrative level and suggesting teachers should be involved; 61% of classroom teachers felt teachers should be involved.

RICHARDS, JANET C.; GIPE, JOAN P.; & THOMPSON, BRUCE. Teachers' beliefs about good reading instruction. *Reading Psychology*, January-March 1987, *8*, 1-6.

Submits a questionnaire to first and third grade teachers in a large urban school system in which information regarding 14 predictor variables and their orientations toward three instructional emphases was explored. The three emphases were graphophonics, skills, and whole language. A total of 225 usable returns provided the basis for the analysis. The skills orientation was not predicted well by the predictor variables. However, the other two orientations were each found to be associated with different canonical functions. Teachers more favorable toward graphophonics methods rated phonics among the most important instructional activities. These teachers also had taught a shorter time, estimated their pupils as more able, and reported having had fewer undergraduate reading courses. Teachers with more diverse training and educational experiences tended to be most favorable toward the whole language orientation.

ALLEN, SHEILAH. Attitudes of preservice teachers toward teaching reading in content areas. *Reading-Canada-Lecture*, Summer 1987, *5*, 96-103.

Submits a 12-item questionnaire to 48 Canadian students enrolled in two sections of a required course in secondary school reading. Students included 25 who were in a fifth-year Bachelor's degree program (preservice) and 23 who were in a post-degree program. The attitude measure was administered as a pre and posttest. In addition to the questionnaire, course grades and demographic data were collected. Results indicated that preservice teachers improved significantly in their attitudes toward teaching reading.

GEE, THOMAS C., & FORESTER, NORA. Moving reading instruction beyond the reading classroom. *Journal of Reading*, March 1988, *31*, 505-511.

Sends questionnaires to 1,124 teachers inquiring about content area reading programs. Of the 466 responses received, 18% indicated that their schools either had or were planning content reading programs. Factors identified as discouraging the development of content reading programs included: (1) beliefs that reading instruction is not the responsibility of content teachers (n = 207), (2) lack of administrative support or leadership (n = 202), (3) lack of inservice education (n = 152), (4) content teachers' belief that they were not qualified to teach reading (n = 139), (5) lack of personnel to coordinate programs (n = 123), and (6) belief that such a program is not needed (n = 123). Factors noted as important for promoting development of content reading programs were recognition of the need, effective inservice education, time for cooperative planning, administrative support, and leadership to coordinate program development.

KILLEEN, JOHN. Approaches to the teaching of English in Dublin city schools. In Vincent Greaney & Brendan Molloy (Eds.) *Dimensions of Reading.* Dublin: Educational Company of Ireland, 1986, 63-76.

Seeks information from Dublin, Ireland, teachers about their priorities and practices in the teaching of English. Findings are based on responses by 209 teachers (72% response rate) of single-grade fifth standards who completed the questionnaire. Checked as very important goals were enabling pupils to read functionally (81.8%), developing pupils' vocabulary (69.7%), developing pupils' communication skills in speech (74.5%), and developing lasting reading habits (69.7%). In the teaching of English, most time was spent on writing, comprehension exercises, vocabulary work, silent free reading, and oral work. When asked to indicate the importance attributed to aspects of teaching English, 47.4% checked written comprehension exercises in the class reader as having great importance. About three-fifths of the respondents felt too little emphasis was placed on reading for enjoyment. Over half of teachers checked that they put great emphasis on recreational reading but 55.6% rarely and 21.3% never displayed books. Less than one-fourth said that they frequently mentioned books which pupils might read for enjoyment.

II-3 Preservice/inservice preparation

SANTA, CAROL M. Changing teacher behavior in content reading through collaborative research. In S. Jay Samuels & P. David Pearson (Eds.) *Changing School Reading Programs: Principles and Case Studies.* Newark, DE: International Reading Association, 1988, 185-204.

Describes a project that combined a theoretical framework and collaborative classroom research to affect changes in secondary teachers' strategies and in their students' learning. The project was based on the teachers' active involvement in discovering knowledge and applying research to their own teaching. Based upon an examination of their existing curriculum, teachers (n unspecified) began to question the current practice of dividing the teaching of reading and learning from the teaching of content material. Three theoretical premises from cognitive psychology were both shared and discovered as teachers engaged in demonstrations, experiments, and applications: (1) the role of textbook organization in learning; (2) the link between background knowledge and reading comprehension; and (3) the importance of the readers' awareness of their own cognitive activities and strategies while reading (metacognition). Teachers designed, implemented, and evaluated instruction based upon what they were learning. The research project resulted in a specific program for teaching reading in content areas from fourth grade through high school and guidelines for dissemination through teacher-conducted inservice training.

SINGER, HARRY, & BEAN, THOMAS W. Three models for helping teachers to help students learn from text. In S. Jay Samuels & P. David Pearson (Eds.) *Changing School Reading Programs: Principles and Case Studies.* Newark, DE: International Reading Association, 1988, 161-182.

Presents three models of staff development for teaching teachers how to help students learn from text. Each of the three models (the intern model, the inservice model, and the evolutionary model) is concerned with four instructional components—students, text (or lecture), test (or goal), and instructor. The *intern model* required a year of university course work in which teachers earned a master's degree with a joint speciality in reading and a content field. When standardized test scores of the students in the content reading specialists' classes were compared with control group classes of comparable students, there were no statistically significant differences. The *inservice model* consisted of a district-funded two-week workshop, with participating teachers paid a stipend and given released time to work with colleagues and orchestrate workshops. An outcome of the workshop was the development of a resource handbook with sample lessons exemplifying vocabulary and comprehension strategies. Evaluation of the workshops focused on teachers' rating of the utility of the instructional strategies. The second-year program focused on the top three ranked vocabulary strategies (preview in context, graphic organizers, and list-group-label) and the top three ranked comprehension strategies (anticipation reaction guides, directed listening lessons, and study guide questions). The *evolutionary model* was exemplified by a single teacher-collaborator who helped to design a series of applied instructional experiments and subsequently influenced the practice of colleagues. A California history teacher demonstrated, for example, that students taught how to construct their own graphic organizers of world history concepts significantly outperformed a comparable class taught an outlining approach.

JAMAR, DONNA, & PAULS, LEO W. Reading teachers are asked "What is relevant in classroom?" *Reading Horizons,* Fall 1986, *27,* 19-25.

Undertakes a survey to ascertain if the activities employed in reading methods classes are compatible with teaching/learning activities actually found in elementary classrooms. One hundred teachers from each of the first, third, and fifth grades were chosen from randomly selected elementary schools in a midwestern state. Number of returns are not reported. Respondents were asked to select and rate activities deemed to be relevant and needed to be taught in reading methods courses for preservice teachers, as well as those most practical for teachers in service. In addition to rating these activities, participants were invited to suggest additional items for inclusion. For methods class inclusion, the top ranking was given to working with a child in a practicum involving diagnosis and remediation. Also rated as important were developing and teaching a skills lesson, observing children being taught, and administering standardized and informal measures. Ranked as important in an elementary classroom were developing a case report on a child, observing children being taught, and scheduling reading instruction for a hypothetical group of children. Suggestions for additional activities included more experience with children, gathering a materials resource file, and knowing several approaches to teaching reading.

BATES, GARY W., & HUTCHINSON, CARROL M.P. Teacher candidates and EFE in content area reading: Changes in attitudes toward teaching and teaching effectiveness. *Ohio Reading Teacher,* October 1987, *22*(1), 13-20.

Seeks to determine the effects of an Early Field Experience (EFE) program on secondary education majors' attitudes toward teaching, expectations of teaching, and teaching effectiveness. Teacher candidates who represented varying teaching fields and were enrolled in four sections of a required secondary reading methods course served as subjects (n=90). As pretests and posttests, students were administered both the *Attitude Inventory Toward Teaching Students to Learn from Texts in the Content Areas* and a 10-item questionnaire developed to measure attitude and expectations toward teaching. The EFE was a laboratory component requiring the teacher candidates to prepare lessons and tutor a student for 20 hours, applying strategies they were learning in their college class. Weekly group sessions were held to discuss the field application experience; evaluation and feedback of teaching were given following supervisor observations three times per week. Teaching effectiveness was assessed by an evaluation form completed by the college supervisor after observing an EFE session and again at the end of the semester. A second measure of effectiveness was gained from the students being tutored. There were no significant differences among the teaching fields on the attitude measure following the field experience, using the pretest score as a covariate. Chi square analyses revealed no significant differences in the supervisors' or tutees' perceptions of effectiveness among the content majors. There were significant differences in attitudes toward and expectations of teaching following the EFE. Those differences included the perceptions the teacher candidates held that they could get their ideas across and could apply classroom assignments and exercises. Tutees reported benefits of better grades and understanding of content classes.

NILES, JEROME A., & LALIK, ROSARY V. Learning to teach comprehension: A collaborative approach. In John E. Readence & R. Scott Baldwin (Eds.) *Research in Literacy: Merging Perspectives.* Thirty-sixth Yearbook of The National Reading Conference, 1987, 153-160.

Examines what 26 student teachers said they learned and how they worked when participating in self-selected collaborative learning groups where the task was to plan instruction for children. In session one, groups audiotaped their planning as they developed a 30-minute teaching lesson. In session two, groups reported on their lesson and planning process, and answered questions from their university classmates before completing a written evaluation of each session. Data sources were the participants' evaluations and the transcriptions of planning and presentation sessions. Responses were coded for statements about outcomes and for affective responses. Two planning tapes were thoroughly analyzed, as well as segments of the large group presentations. Participants liked sharing and testing their ideas with others and learning new ideas. Differences were found in the planning tapes in how groups approached their task of planning for the children. Content of ideas discussed included statements about learners, the reading process, contextual factors and specific activities.

DUFFY, GERALD G.; ROEHLER, LAURA R.; SIVAN, EVA; RACKLIFFE, GARY; BOOK, CASSANDRA; MELOTH, MICHAEL S.; VAVRUS, LINDA G.; WESSELMAN, ROY; PUTNAM, JOYCE; & BASSIRI, DINA. Effects of explaining the reasoning associated with using reading strategies. *Reading Research Quarterly,* Summer 1987, *22,* 347-368.

Examines the effects of a teacher training program on teacher behavior in the classroom and on low-achieving pupils' awareness and achievement. Twenty volunteer third grade teachers were assigned to one of two treatment groups. The experimental group received a series of training sessions designed to teach them how to modify their basal instruction so that emphasis was on the mental processing involved in using skills as strategies. The control group's training focused on the routine use of their basal program while incorporating management principles. Six classroom observations were made of all teachers and five supplementary observations of experimental teachers. Teacher explanation was assessed by analyzing transcripts of audiotaped reading lessons. Pupil awareness was determined by post-lesson interviews and a concept interview given at the end of the school year. Four measures of pupil achievement were used. Experimental teachers were found to be more explicit in explaining the mental processing associated with using reading skills as strategies. Significant differences in pupil awareness emerged as lessons progressed. Children in the experimental classrooms exhibited significantly higher achievement on most measures except the standardized comprehension test.

JARVIS, JENNIFER. Meeting the reading needs of trainee primary school teachers of English. *Reading in a Foreign Language,* Spring 1987, *3,* 429-448.

Describes parts of a research project designed to identify and meet the reading needs of trainee primary school teachers of English in ESL/EFL contexts. Approximately 400 trainees in eight training colleges, five in Tanzania and three in Malawi, were involved. In the first year of the three year project, reading tests were developed and administered to trainees. The battery of tests covered a number of different strategies and skills. Although trainees in Malawi scored 20% to 30% higher than those in Tanzania, test ranking of skills were similar.

Observations and discussions with teachers and tutors led to some findings about problems encountered. Trainees' experience with text was largely one following a pattern in which teachers first read the text aloud, and then called on learners to read parts of the same text aloud. Questions were then gone over first orally and then in writing. These and other findings led to the development of a manual which tutors could use to help trainees. The manual, emphasizing a modeling approach, is described.

II-4 Roles

Lynch, Patricia, & O'Sullivan, Anne. Remedial teaching in Irish primary schools. In Vincent Greaney & Brendan Molloy (Eds.) *Dimensions of Reading.* Dublin: Educational Company of Ireland, 1986, 88-105.

Surveys remedial teachers in Ireland to obtain information on their training, experience, and roles. Questionnaires were sent to 673 remedial teachers in national schools; returns were received from 475 teachers. Some 80% either had attended or were attending a course for remedial teachers. Of those who had taken or were taking a course, 91% felt competent to handle reading problems, 73.1% felt competent to handle learning difficulties, and 71.8% felt competent in program planning. When asked to select an option best describing their present role, 85% checked "teacher of weak groups," while 73.7% checked that their preferred role would be as a consultant to the classroom teacher. About 80% felt that classroom teachers found them a great help. In 80% of remedial cases, pupils receive instruction on a daily basis, with 19% attending two or three times weekly. The most common reason for referral to the remedial teachers was "backwardness in reading generally."

Andrews, Richard L., & Soder, Roger. Principal leadership and student achievement. *Educational Leadership,* March 1987, *44*(6), 9-11.

Derives data from a two-year study of the relation between principal leadership and pupil academic achievement in reading and mathematics. Gains in individual student normal curve equivalent scores on the *California Achievement Test* were used as the measure of improved academic performance. Data from 33 elementary schools were used. Schools were divided into three groups based on staff perceptions of the principal as an instructional leader. Gain scores of pupils in strong leader schools were significantly greater in both academic areas than those of pupils in the other two groups.

Young, Raymond J. Administrative intervention—an integral aspect of the reading program. *NASSP Bulletin,* May 1988, *72*(508), 89-94.

Cites selected literature addressing the correlates and causes of students' inability to gain meaning from print, describes why existing secondary reading programs fail to meet this objective, and summarizes the role of administrators in effective programs. The reviewer draws implications for the administrator's leadership position in improving instructional programs. Those generalizations include the active role of the principal in setting instructional expectations and establishing a communication system through which successful practices can be shared. In addition, effective administrative intervention means that principals are familiar with the role of diagnosis, the nature of instructional materials, the options for instructional strategies, as well as the necessity for helping all teachers understand their responsibility in ensuring that all students learn from their texts.

Daniels, Susan J., & Hoffman, Amy. Are elementary principals qualified to evaluate classroom teachers of reading? *Ohio Reading Teacher,* April 1988, *22*(3) 6-14.

Surveys a national sample of school principals to determine their qualifications for evaluating reading instruction. A questionnaire tapping principals' courses in reading and in administration, their teaching and administrative experience, as well as their involvement with evaluating teachers was mailed to 1,000 randomly chosen school districts. Responses were received from 519 principals, the majority of whom (59%) were principals in schools with 100 to 499 students. Only 3% were principals of schools with over 1,000 students. Most principals (66%) stated that their certificates were completed between 1966 and 1980. Although 12% of the respondents indicated that they had never taught in an elementary school, 32% had taught for at least 10 years, and 34% had four to seven years experience teaching reading. While 14% had never taken a course in reading, 34% reported taking two or three courses. Of the courses the principals reported taking, 59% were described as general reading methods. For their administrative certificates, the principals reported that 36% of their coursework had been in administration, 23% in supervision, and 12% in curriculum. The majority (n=271) had 10 or more years experience supervising reading teachers. The survey did not reveal that recently trained principals had more reading background or had taken more reading courses. Further, it appeared that recently trained principals did not have more teaching experience. Principals' evaluation forms were not augmented by other supervisory personnel, even for principals with less experience in supervision. Finally, there was a negative correlation between years in teaching and years in administration, implying that the fewer years in teaching, the more years in administration ($p < .02$).

RUBIN, MARY. What's in a name: The need for resolution of terminology confusion in developmental education. *Journal of College Reading and Learning*, 1987, *20*, 8-15.

Reports the result of a questionnaire survey of higher education governing boards to determine what official definitions (if any) are used when discussing college or university learning center operations. The questionnaire asked if the state had an official definition for the terms *remedial* and/or *developmental*. If such definitions existed, the respondents were asked to indicate their applicability to vo-techs, community colleges, junior colleges, four-year colleges, and/or universities. Respondents were asked to include definitions when returning the questionnaire. Of the total of 61 questionnaires, 35 were returned. Nearly all states with official definitions reported using the definitions to determine credit and degree applicability of coursework defined as remedial or developmental. Seventeen state agencies replied that no official definitions existed for the state. Two others indicated that each campus in the state developed its own definitions. The remainder of the respondents indicated that one or both of the terms are officially defined in various documents. A common means of defining terms was based on test results. Other states relied on definitions reflecting concepts of growth.

ROBBINS-WILF , MARCIA. How do New Jersey's private reading service centers operate? *Reading Instruction Journal*, Fall 1987, *31* (1), 23-28.

Examines the role and functions of private reading service centers in New Jersey. Directors of 30 institutions responded to a 57-page questionnaire examining general operational frameworks, staff, programs, administrative policy, and physical environments of the centers. Data were received from 55% of the institutions sampled. Findings were compared with practices recommended by the *Guidelines for the Professional Preparation of Reading Teachers* of the International Reading Association. Concerns were raised about credentials and training of staff members, limited use of a variety of diagnostic tests, provisions for handicapped clients, physical facilities, and limited use of case study approaches. Most centers were not actively engaged in conducting research on reading diagnoses or instruction.

II-5 Evaluation of programs and materials

RAKOW, STEVEN J., & GEE, THOMAS C. What reading techniques do mathematics teachers find valuable? *School Science and Mathematics*, March 1988, *88*, 210-217.

Reports the result of a survey of 380 mathematics teachers randomly selected from the subscription list of the *Mathematics Teacher* to determine what reading strategies the teachers find to be of value in helping their students solve mathematics problems. Respondents were asked to rate the value of 36 selected reading strategies on a five-point scale, as well as to rate their perception of their own confidence in using each strategy. The categories of strategies which the teachers viewed as most helpful were: (1) helping students to understand vocabulary; (2) teaching students to use the textbook; (3) assisting students during reading; (4) asking questions during reading; (5) assessing the readability of written materials; and (6) providing advance organizers.

HOFFMAN, JAMES V. (ED.) *Effective Teaching of Reading: Research and Practice*. Newark, DE: International Reading Association, 1986.

Represents the efforts of the Teacher Effectiveness in Reading Committee of the International Reading Association to review, analyze and interpret the research on effective teaching as it relates to reading instruction. The text's 13 chapters provide historical perspective on the development of effective teaching research as well as apply the finding to classrooms. Sections address the historical context, process-product research, case studies of research into practice, innovation in research and in staff development, as well as a review focusing on compensatory instruction.

CONLEY, MARK W., & MURPHY, ANN G. Effective schools/effective teaching research. In Donna E. Alvermann, David W. Moore, & Mark W. Conley (Eds.) *Research Within Reach: Secondary School Reading*. Newark, DE: International Reading Association, 1987, 14-24.

Discusses the findings of effective schools research, offers some reasons why effective schools research often fails to become integrated into secondary school reading programs, and describes some emerging trends in content reading research related to effective teacher decisions. In general, those trends have emphasized awareness of the importance of teachers' direct involvement in staff development, and examination of how knowledge about content reading can help teachers make better decisions about the use of textbooks and guides.

REUTZEL, D. RAY, & DAINES, DELVA. The text-relatedness of reading lessons in seven basal reading series. *Reading Research and Instruction*, Fall 1987, *27*, 26-35.

Endeavors to determine the degree to which instructions contained in the manuals for teachers relate to the stories pupils encounter in their basal readers. Selected from the tables of contents were five instructional units each at each grade level from each of seven basal series designed for use in grades one through six. A total of 210 randomly selected instructional units was examined using a set of author-developed criteria to evaluate the materials for evidence of attempts to relate the instruction in five major areas to the text: (a) vocabulary development, (b) phonics instruction, (c) word structure analysis, (d) comprehension, and (e) study skills. Relatedness ranged from 0% to 100% across the five instructional areas studied. Data indicated that the instructions contained in the teachers' manuals related to children's stories less than 40% of the time. By removing comprehension questions on the overall text-relatedness estimate, instruction was related to the text only 31% of the time.

KAGAN, DONA M. Evaluating an individualised reading programme. *Journal of Research in Reading*, February 1988, *11*, 15-25.

Evaluates an individualized reading program in a metropolitan school district in an attempt to account for the effect of instructional materials on children's attitudes. The relation between teachers' cognitive styles and the ways they used the instructional program was examined, as was the match between the materials and the children's modes of learning. A third area of inquiry was the relation between the amount and frequency of reading done by parents and their children's attitudes toward reading. Thirty-seven elementary teachers prepared written prescriptions (n=569) for 104 pupils over a three-month period, targeting their specific deficiencies for remediation. Prescriptions included the following information: target skill, scores on a pretest of that skill, instructional activities, and posttest scores. Teachers were free to prescribe any combination of 70 different instructional materials, including worksheets, tapes, computer software, or basal readers. Regression analyses were used to examine relations between teachers' cognitive styles and the numbers and kinds of materials they selected for pupils. Regression was also used to identify significant predictors of positive reading attitudes among children. Teachers who tended to be more affectively (as opposed to analytically) oriented tended to use more instructional materials. Among pupils, preferences for independent modes of learning were significant predictors of positive reading attitudes. Parental reading habits and the total number of materials prescribed were also positively related to reading attitude.

GEE, THOMAS C., & RAKOW, STEVEN J. Content reading specialists evaluate teaching practices. *Journal of Reading*, December 1987, *31*, 234-237.

Reports the results of a survey of 37 reading professors designed to gather their responses to a set of teaching recommendations for content reading specialists. A list of 23 practices was assembled from recommendations in the professional literature. Practices dealt with guiding prereading, activating prior knowledge, providing direct instruction, summarizing reading, and guiding postreading discussions. The experts rated the practices on a five-point scale from "of no value" to "most always valuable" for the majority of students in content classes. In additon, the respondents were asked to identify any additional practices they considered particularly effective for improving comprehension. The mean rating for 22 of the 23 items ranged from 3.3 to 4.8, meaning from "occasionally" to "often valuable." The lowest mean rating (2.6) was assigned to the suggestion that the teachers read aloud or tape record material for students to listen to as they follow the text. The respondents' additional suggestions centered on: 1) the importance of using multiple texts; 2) the use of study guides for focus; 3) the encouragement of metacognitive strategies; and 4) the use of direct instruction, modeling, and increasing students' independence.

MEYER, LINDA. Research on implementation: What seems to work. In S. Jay Samuels & P. David Pearson (Eds.) *Changing School Reading Programs: Principles and Case Studies*. Newark, DE: International Reading Association, 1988, 41-57.

Traces research on program implementation from several studies done within the past 15 years. In particular, the focus is on the process of mutual adaptation as an instructional change agent. Early studies reporting success with mutual adaptation, a process in which teachers and others plan together for change strategies, are reviewed as well as reinterpretations of the data. Detailed attention is given to two large scale change efforts, the New York City School Improvement Project and the implementation of a Direct Instruction Follow Through site. A brief discussion and summary section conclude the chapter. It is stressed that change likely hinges upon directed development. Experts need to operate in classrooms where they serve as a model for teachers to observe.

REID, ETHNA R. Practicing effective instruction: The exemplary center for reading instruction approach. *Exceptional Children*, April 1986, *52*, 510-519.

Describes the functioning and practices of the Exemplary Center for Reading Instruction (ECRI), an on-going project designed to instruct teachers in the effective and efficient use of time in the classroom. Included also is a section reviewing the research bases and evaluation of the ECRI instructional program. The original project was assessed over a 3-year period with 700 pupils in four Utah school districts. Results were very positive. Additional data from compensatory and special education classrooms are also presented to substantiate the effectiveness of ECRI with other types of pupils.

MADDUX, CLEBORNE D., & CANDLER, ANN. Readability, interest, and coverage of 10 textbooks on educational assessment. *Psychological Reports,* April 1987, *60,* 631-636.

Runs Flesch readability and interest scores for 10 textbooks for use in educational psychology courses dealing with educational assessment. Readability scores ranged from 62 (standard, grades 8 to 9) to 45 (difficult, college level) with five of the texts falling into the fairly difficult, grades 10 to 12 category. Human interest scores ranged from 20 (mildly interesting) to 3 (dull). Seven of the textbooks fell into the dull category. Analysis of topic coverage across textbooks indicated that measurement was widely treated, while topics receiving poor coverage included prediction and regression, selecting tests, inference and probability, and analysis of variance.

II-6 Reading habits

MANNA, ANTHONY L., & MISHEFF, SUE. What teachers say about their own reading development. *Journal of Reading,* November 1987, *31,* 160-168.

Reports results of an inquiry into preservice and inservice teachers' perceptions of their development as readers. Graduate and undergraduate students enrolled in courses in children's and adolescents' literature were asked to complete a reading autobiography. The autobiographical instrument asked general questions about the people, places, and events that had influenced the respondents as readers. In addition, the instrument tapped the university students' classroom and home experiences with reading, their developmental patterns in terms of content and types of reading materials, their assessments of their competence as readers and their perceptions of themselves as teachers of reading. Of the 1,000 autobiographies collected, 25 randomly-selected undergraduate and 25 randomly-selected graduate autobiographies were analyzed for the frequency of positive and negative factors. The descriptions of positive out of school factors clustered around family reading, libraries and librarians, and friends. Family reading was mentioned by 72% of the respondents as establishing positive attitudes that were instrumental to their continued interest in reading. Exposure to public libraries was noted as a significant influence by 68% of the respondents. Fifty percent considered friends to be an influence on attitudes toward reading. Conversely, 36% of the undergraduates and 20% of the graduates reported that reading was not a priority in their homes. Other negative out of school factors most frequently mentioned were lack of literary heritage (22%), constraints on book selections (28%), and censured reading choices (24%). Positive school factors that were most frequently mentioned included teachers (38%), instructional practices (38%), and learning environment (22%). Teachers who encouraged active participation and efforts to make reading personally meaningful were viewed as effective. The most frequently mentioned negative factors were the book report (84%), competitive classroom activities (78%), and a restrictive classroom tone in terms of a limited range of reading experiences (78%). Overall, the statements contained more positive comments about out of school experiences and more negative statements about school experiences. In contrast to practicing teachers, preservice teachers had fewer positive experiences with reading at home and at school. Profiles of two types of readers were drawn: the "reduced" reader who has not experienced reading as a pleasurable activity and the "transactional" reader who has become engaged with texts and authors, has had opportunities to share reading, and has a concept of reading as a meaningful process.

Poole, Roger. The books teachers use. *Children's Literature in Education,* Fall 1986, *17,* 159-180.

Presents a list of the fiction British primary, middle, and secondary teachers most frequently read or allow to be read in their classrooms. The teachers (n=626) were asked to complete a questionnaire or to keep a record book including the authors and titles of books read silently or aloud in their classrooms. In addition, the survey was concerned with activities that grew from the reading, including such things as opportunities to write, draw, and act. The survey results indicated that a total of 3,686 stories were read orally or silently in primary schools, 1,271 in middle schools, and 1,856 in secondary schools. Read-alouds represented 438 separate titles listed by 251 of the teachers and were taught in 7,118 lessons totalling 4,597 hours. Charles Dickens, C.S. Lewis, and R.L. Stevenson were among the six most frequently cited authors on all lists (primary, middle, and secondary). The Narnia series was cited most frequently or second most frequently at all levels. Using a list of 104 authors of merit gleaned from librarians and other expert sources, the researcher compared the list with the teachers' citations. Of the total list, 47 of the authors were not cited at any level. The researcher concluded that there is little evidence of much recency in teachers' book choices. Rather, there was a parallel and overlapping tendency, with teachers emphasizing the traditional and well-established. A few titles accounted for the high proportion of total references.

Poole, Roger. Teaching fiction in the classroom: What teachers do. *Research in Education,* May 1987, No. 37, 61-98.

Investigates how 626 primary, middle, and secondary teachers in England use fiction in their classroom teaching. "Use of fiction" was defined as books read aloud to children or books read silently under the supervision of the teacher. It did not include reading instruction or practicing the mechanics of reading. One group of teachers volunteered to complete questionnaires (n=375) about the kind of fiction they read and the use to which they put it. A second group (n=251) agreed to keep detailed records, giving the time and duration of lessons, and the procedures they incorporated when they used fiction in their teaching. A total of 7,118 lessons representing 4,597 hours were recorded. In questionnaire responses, teachers indicated that the values of story included educational, aesthetic, and cultural experience. However, based on analysis of journals, it was concluded that teachers appeared to read little quality narrative with their students outside of the works of a small set of well known authors. Although most teachers indicated that silent reading could occur at any time, they also indicated that they viewed silent reading as a non-teaching activity. The total amount of time spent on whole stories did not vary greatly across age groups, but time spent on story extracts did increase across age levels. [Extracts were described as books of passages with a focus on comprehension]. Similarly, total lesson length increased for older children. The types of written and non-written response opportunities provided for children were also summarized. The most frequently reported response opportunity for all students was "discussion," and the proportion of opportunities to discuss increased for older students. Secondary teachers reported asking for interpretive discussion almost three times as frequently as primary teachers. Movement from primary to secondary school saw an increasing emphasis on written work, formal or quasi-formal in nature, and narrower in scope. When younger (ages 7½ to 9) and older (ages 9½ to 11) primary pupils were compared, no marked differences appeared in amount of follow-up work or in lesson length. The differences between primary and secondary classrooms were then described as differences in ethos or outlook, with the secondary school more rigorous and demanding.

Walton, Sherry. Who's the research for? Montana teacher's perceptions and uses of research in education. *Montana Reading Journal,* November 1987, *1*(1), 15-20.

Obtains teachers' perceptions and uses of research and knowledge of research terminology. Surveys were sent to all K-8 teachers in a random selection of 50 Montana schools.

Completed surveys were returned by 145 teachers in 25 of the schools. The most frequently read professional journal was the *Instructor* (45%) followed by *Learning* (30-45%). Only 15% of respondents indicated that they frequently based instructional decisions on research; 18% reported frequently using methods described in journals. Some 46% reported not having time for professional reading. Questions teachers felt should be researched fell into three categories: effective teaching techniques, classroom environment, and classroom management. About half of the respondents stated that they would be interested in learning to be more effective readers of professional literature, and 35% indicated interest in learning how to conduct research in the classroom.

II-7 Research

Willows, Dale M.; Borwick, Diane M.; & Butkowsky, Irwin S. From theory to practice in reading research: Toward the development of better software. In Michael Pressley & Joel R. Levin (Eds.) *Cognitive Strategy Research: Educational Applications.* New York: Springer-Verlag, 1983, 157-187.

Includes results of an analysis of articles relevant to both theory and practice in reading published between 1967 and 1981 in the *Journal of Educational Psychology* and the *Reading Research Quarterly.* Four dimensions of the research are viewed: goals of the research questions, kinds of research designs employed, types of variables considered, and nature of the inferences drawn. A total of 267 research articles appeared in the two journals. Three categories of research emerged: (1) basic research on reading, (2) basic educational/instructional research concerned with issues related to educational practice, and (3) applied/instructional research which dealt more immediately with practical questions. The number of applied studies remained about the same over the 15-year period, while the numbers in the other two categories increased considerably. Designs predominating tended to be correlational, Treatment × Subjects, and Treatment × Levels × Subjects, with the latter employed in more than half of the articles surveyed. The authors argue that in both the within-grade and across-grade reading skill differences studies there are confounding of hardware and software factors which reduce the utility of the results. Hardware refers to those individual difference factors that tend to be relatively stable; software, to factors which are likely to be responsive to training. Reading researchers have not distinguished between the two aspects of learning to read.

Pearce, Daniel L. Works covered in graduate reading research courses: Two surveys. *Reading Horizons*, October 1987, *23*, 39-48.

Conducts a two-part survey (1) to identify reading selections suggested for a graduate reading research course and (2) to clarify why certain selections were cited. The survey was mailed to 300 reading professors at U.S. institutions offering graduate courses; responses were received from 102 instructors who cited 642 different works. Twenty selections were cited five or more times. A follow-up survey was sent to the 30 professors who had submitted at least two works which had been named four or more times in the first survey. These individuals were asked to select from five categories the one best describing why they had chosen each work. Twenty-four responses were received. Perceptions of studies varied.

Dehert, Florence E., & Pauls, Leo W. Computerized searches on articles reporting reading research: A closer look. *Reading Horizons*, Spring 1987, *27*, 209-217.

Explores the effect of choice of terminology used in database records and in searches on retrieval. The following search services were utilized in comparing findings based on 50 articles in the psycholinguistic literature: *ERIC/CIJE* (Current Index to Journals in Education), *LLBa/Online* (Language and Language Behavior Abstracts, and *PsycINFO* (Psychological Abstracts). Of the 50 articles, 27 were found assigned to section headings in *LLBa/Online*. Section headings were those judged appropriate to the content by the searcher and a reading specialist who had studied the articles. In the *PsycINFO* database, 23 of the articles were identified. Descriptors assigned by the three databases were compared for two articles on acquisition of comparative adjectives. In some instances, terms in the thesaurus for each of the three databases were not assigned to the articles. Identical terms assigned to an articles by all three databases were few in number. Phrase fields supplied by *LLBa/Online* and *PsycINFO* for the two articles were compared. Again, disagreement was found.

RASINSKI, TIMOTHY V.; REINKING, DAVID; & SCHILKOWSKY, CARL. Which institutions produce graduates who publish in leading research journals? *Reading Research and Instruction*, Spring 1988, *27*(3), 51-59.

Identifies the institutions granting doctorates to 547 authors publishing in the *Reading Research Quarterly* and the *Journal of Reading Behavior* between 1980 and 1985. Represented were 104 different institutions. Institutions were then ranked by the number of different authors associated with each and also given were the top 20 receiving the highest publication scores and the top 25 in number of sole or lead authorships. An additional ranking was also given on the basis of a score computed by multiplying the research publication score and the number of different authors from each institution. Ten institutions accounted for 27% of all authors. Seven universities ranked 10th or above on all four counts.

THOMPSON, RICHARD A. Professors' workloads. *Journal of Reading Education*, Fall 1987, *13*(1), 5-7.

Reports a survey of members of the Organization of Teacher Educators in Reading (OTER) in six state university systems to determine the distribution of professors' workloads. Members of OTER were asked to indicate the percentage of their assignment devoted to sponsored research, graduate students, community service, and to teaching. Teaching loads ranged from nine to 12 hours across universities. Rank of the professor did not seem to be a variable in workload assignment or expectations. Professors' assignments were predominantly teaching, with research and community service expected in addition to teaching.

III. Sociology of reading

III-1 Role and use of mass media

MILLER, M. MARK; SINGLETARY, MICHAEL W.; & CHEN, SHU-LING. The Roper question and television vs. newspapers as sources of news. *Journalism Quarterly*, Spring 1988, *65*, 12-19.

Relates responses to the Roper question to other measures of media use and to public affairs knowledge. (The controversial Roper question asked subjects where they got most of their news about what was going on in the world today. The way answers were tabulated and the last part of the question have been criticized.) In telephone interviews 339 subjects answered the Roper question, as well as questions about current events, frequency of media use, and demographic information. For media used, 69% stated television; 53%, newspapers; 24%, both; 20%, radio. In the sample, 40% named newspapers first; 46%, television; 14%, another medium. The analysis of the hypotheses was based on the 290 subjects choosing either newspapers or television as first choice. Hypotheses were tested in a number of ways. Modest support was found for the hypothesis newspaper preference is more associated with newspaper exposure than television preference is associated with television exposure. People choosing newspapers as their primary source of information had higher levels of public affairs knowledge than those who chose television. The differential relationship between media choice on public affairs knowledge was greater for state/local news than for national/international news. Preference for a medium did not seem to indicate exclusivity of exposure to a single medium. Low levels of awareness for public affairs knowledge were found.

McDonald, Daniel G., & Reese, Stephen D. Television news and audience selectivity. *Journalism Quarterly*, Winter 1987, *64*, 763-768.

Compares groups who rely on television with those who rely on newspapers for news on types of news programs they watch and on selectivity in news viewing. Subjects were 58 who ranked newspapers as their primary source of news and 39 who ranked television as their primary source. In their television viewing diaries, they listed the amount of viewing, the news programs watched, and the number of changes of programs (selectivity) made. Additional measures were age, education, and the number of television sets per household. Significant differences were found in age and educational levels between the two groups, with the newspaper reliant being older and better educated than the television reliant, the latter having more television sets than the first grouip. T-test results showed a greater tendency for the newspaper reliant to watch more issue-oriented news and to be selective in viewing local news progrms and the *MacNeil-Lehrer Report*. The television reliant were more likely to view the news feature program, *PM Magazine*, and to be selective in viewing that program.

Howard, Herbert H.; Blick, Edward; & Quarles, Jan P. Media choices for specialized news. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 620-623.

Determines which media are the preferred sources for four categories of special news: medicine, science, business, consumer economics. The 310 subjects, who were interviewed by telephone, described the level of their interest in each of the four categories. Subjects indicating a moderate or strong interest told which media were used to obtain that type of information. Both sexes placed the four categories in the same rank order: medicine, consumer economics, science, business news. They ranked the media in the following order as preferred sources of specialized news: local television affiliates, local newspapers, magazines, radio, cable networks, national newspapers, other sources (such as interpersonal contacts). Some sex differences were noted.

Self, Charles C. Perceived task of news report as a predictor of media choice. *Journalism Quarterly*, Spring 1988, *65*, 119-125.

Compares the relative power of classic predictors of medium choice (age, sex, income, education) with news concept, defined as the most important task of a news report. In a telephone survey 508 adults chose one from three tasks of a news report as the most important: to give facts objectively, to explain facts, to report all sides of an issue fairly. Dependent variables included four different ways of measuring the choice of news medium: which they believe when media report an event differently; which they most enjoy; which they trust most in making their own decisions; and which medium gives them the most information about state government and politics. Neither sex nor age predicted choice of medium; education and income were related to three dependent variables and to the percevied task of news reports. The task selected as the most important for a news report proved to predict which news medium was believed, trusted, and used. Print (49%) and broadcast media (51%) were most believed when giving facts was considered the most important task; print (21%) and broadcast media (79%), explaining facts; print (28% and broadcast media (71%), giving all sides of an issue.

Nicolini, Pia. Puerto Rican leaders' views of English-language media. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 597-601

Describes how one eastern city's Puerto Rican community leaders perceive the mass media and compares their responses to those of Mexican Americans from an earlier study. Interviews were conducted with 59 Puerto Ricans. Their responses were coded according to their assessments of general news coverage and of media coverage of Hispanics, media portrayals of Hispanics, and Hispanic and non-Hispanic reporters. Both Mexican-American and Puerto Rican leaders voiced much dissatisfaction with the quality of news about Hispanics and complained about negative portrayals of them. Both groups were dissatisfied most with newspapers, followed by radio and television. Puerto rican leaders were less likely than the Mexican Americans to emphasize racism as an explanation for the perceived poor coverage.

BONFADELLI, HEINZ. Uses and functions of mass media for Swiss youth: An empirical study. *Gazette*, 1986, *37*(1, 2), 7-18.

Seeks data on the uses and functions of mass media for 2,137 children and adolescents in 25 communities in the German-speaking section of Switzerland. As a part of a larger study, these subjects, ages 9, 12, and 15, were interviewed with a self-administered questionnaire in classrooms. Almost all had access to print and electronic media in their homes, but traditional print media reached more children from upper and upper-middle class than from working and lower-middle class. Sex discriminated more strongly than social family backgrounds between readers and nonreaders of books, the latter being favored by girls. Over 50% of the total sample used television, radio, and records almost daily. Exposure to the various print media was lower; but every day 40% read books, 25% newspapers; 14%, comics. Functions served by the media were determined by asking the subjects which media they used for each of 12 situations related to media behavior. Changes were noted for each age group.

VILANILAM, J.V. Youth and the media in Kerala, India: Two preliminary research reports. *Gazette*, 1986, *37*(1-2), 79-86.

Reports two studies and reviews the mass communication scene in India. The first study was concerned with influencing factors regarding eight situations for 50 subjects, ages 18-25. Friends and family were mentioned most frequently; mass media, very seldom. In the second study newspaper reading habits of college students in the city of Trivandrum were investigated. The 100 subjects, divided into predegree, degree, and postdegree students, answered a questionnaire in personal interviews. About 65% read the newspaper for information, 18% for entertainment, 9% for cultural interaction, and 7% for passing time. Approximately 60% considered the newspaper to be the most reliable medium, but 24% relied on television and 13% on radio for their news needs. Newspaper items interesting students the most differed from group to group. Other findings are included in the report.

OGAN, CHRISTINE L. Mass media use factors in a Turkish squatter settlement: A 23-year panel study. *Gazette*, 1987, *40*(3), 145-166.

Examines the changes in the use of mass media by poor residents in a squatter area in Turkey over a 23-year period. In 1965, 65 of the original subjects from a previous study and in 1985, 33 of these subjects were reinterviewed. The second and third waves focused on media habits, attitudes concerning village and urban life, economic aspirations, and their personal economic situation. Many of the same questions were used all three times. In 1985 all subjects owned a television set, resulting in an increase in television viewing. In spite of a high rate of illiteracy, daily newspaper readership was quite high and remained stable over time, between 35.1% and 44.2%. Subjects preferred to read about domestic, international, and political news, editorials, and columns over features at all three times. Newspaper readership was the only medium-use variable that was consistently related to the socioeconomic condition of the subjects. In 1985 television was considered the most believable medium by 51.5%; newspapers, by 9.1%.

NICOLINI, PIA. Philadelphia Puerto Rican community leaders' perceptions of Spanish-language media. *Mass Communication Review*, 1986, *13*(1,3), 11-17.

Reports evaluations of the Philadelphia Spanish-language media made by 56 Puerto Rican leaders in face-to-face interviews. Their comments concerning coverage of Spanish-language media (newspapers, radio, television) available in Philadelphia were coded as to their satisfaction or dissatisfaction. It was concluded that community information needs are only partially fulfilled by the available Spanish-language media. A significant gap in local news coverage, in comparison with international, national and Puerto Rican issues, was noted. This criticism was made of all three media.

LUCAS, CHRISTOPHER J., & SCHMITZ, CHARLES D. Communications media and current-events knowledge among college students. *Higher Education*, 1988, *17*(2), 139-149.

Ascertains media sources of college students and their knowledge of current events and compares their responses with types of media exposure. A 39-item questionnaire was administered to 863 college students. Response patterns on the current events test were analyzed in terms of interrelationships among gender, frequency of use of television and newspapers, self-ascriptions of awareness of current events, ascriptions of the importance of a well-informed citizenry, and grade point average. Data were tested by chi square and stepwise multiple regression. As measured by test results, self-appraisals of current events knowledge were realistic. Although television was cited most frequently as a news source, television-viewing did not correlate highly with test performance. Students with the highest current events scores sought different sources, especially newspapers and news magazines. Males tended to outperform females.

LACY, STEPHEN. The effect of growth of radio on newspaper competition, 1929-1948. *Journalism Quarterly*, Winter 1987, *64*, 775-781.

Questions if the development of the radio industry between 1929 and 1948 contributed to the decline of daily newspaper competition in the United States. All of the 72 cities selected for study were competitive in 1929, but 24 became noncompetitive between 1929 and 1948. Five variables to predict changes in newspaper competition included changes of population, gross retail sales, percentage of all retail stores owned by retail chains, radio stations, and radio stations per capita. The first three were control variables; the last two, measures of the independent variable. Discriminant analysis was used to test the relationship between radio development and newspaper competition. With the exception of a few markets, the development of radio had little overall effect on the decline of newspaper competition.

LATIMER, MARGARET K. The floating voter and the media. *Journalism Quarterly*, Winter 1987, *64*, 805-812, 819.

Compares floating and stable voters in a state election on personal attributes and media use and questions whether media information produces volatility or stability. Data from an Alabama panel study conducted during the 1982 gubernatorial election included pre-election preferences, successive voter decisions, media habits, and information about attitudes and demographic background of subjects. Measures of media use were quantity of public affairs material viewed on television or read in the newspaper. Discriminant analysis was used. Among the findings were the following: television is viewed heavily by stable voters during the primary, but the media habits of the two groups are not significantly different during the general election. Newspaper reading was not significant in the discriminant analysis, but a high percentage of heavy newspaper readers were stable voters in the primary; during the election all kinds of voters exhibited similar newspaper habits. Higher SES and greater information seeking best described voters who switched vote intention in this state election.

YUM, JUNE O., & KENDALL, KATHLEEN E. Sources of political information in a presidential primary campaign. *Journalism Quarterly*, Spring 1988, *65*, 148-151, 177.

Investigates the nature of media use for political information in a state Democratic presidential primary in 1984. In telephone interviews, 276 subjects named their sources of information and estimated the percentage of political information they obtained from each source. Television was the most frequently mentioned source (86%) but was mentioned only 4% more often than newspapers (82%). The average subject relied upon 2.6 sources of news. With higher educational level and income there was less dependency on television for political news. Older subjects and females depended significantly more on television than younger subjects and males.

McCLENEGHAN, J. SEAN. Impact of radio ads on New Mexico mayoral races. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 590-593.

Explores the interaction of radio advertising and small daily and weekly newspapers in 11 New Mexico mayoral races. Campaign data were collected for two weeks prior to the general election day. All news stories, pictures, and advertising pertaining to the candidates were measured to the nearest one-half column inch. All radio political advertising pertaining to the candidates was tabulated into seconds to see which candidate was favored. The discriminant analysis correctly classified 73% of the winners and 91% of the losers. In a step-wise discriminant test, radio advertising and campaign spending were the significant variables. Newspaper endorsements and newspaper coverage were nonsignificant.

RUST, ROLAND T.; BAJAJ, MUKESH; & HALEY, GEORGE. Efficient and inefficient media for political campaign advertising. *Journal of Advertising*, 1984, *13*(3), 45-59.

Compares three advertising media (television, newspapers, magazines) as to their efficiency in reaching voters. Data were obtained through questionnaires from 5,653 subjects on their voting participation in 1976 or 1977 elections, as well as quintiles (computed from media diaries) for amount of television viewing and amount of magazine reading along with terciles for amount of newspaper readership. Simple descriptive and log linear analysis were used to test the data. Readership of newspapers and magazines was related positively to voting participation, but no strong relationship was found between television viewing and likelihood of voting participation, with the exception that the heaviest television viewers were less likely to vote.

ELLIOTT, WILLIAM R., & ROSENBERG, WILLIAM L. The 1985 Philadelphia newspaper strike: A uses and gratifications study. *Journalism Quarterly*, Winter 1987, *64*, 679-687.

Investigates the relationship between newspaper gratifications sought and media use during a newspaper strike. Telephone interviews were conducted with 215 adults in October 1985 during the strike, and 142 adults approximately three weeks after the strike was settled. The dependent variables were measures of media use; independent variables, measures of newspaper gratifications; control variables, measures of the subject's social situation and background. Measures of newspaper gratification were based upon the subjects' responses to 11 newspaper gratification items read to them. From these, three gratification dimensions resulted from a principal components varimax rotated factor analysis: surveillance/contact containing six items; just to pass time/to be entertained; and advertising. Surveillance/contact gratifications to use of newspapers, news magazines, local television news during the strike were reasonably supported. This gratification was correlated with measures of total newspaper use and with time spent reading the newspaper after the strike. The findings for the other gratification measures were not significant at either time.

BRAMAN, SANDRA. Public expectations of media versus standards in codes of ethics. *Journalism Quarterly*, Spring 1988, *65*, 71-77, 240.

Compares complaints made by the public about media standards to the National News Council with four codes of ethics, two from print journalism and two from broadcasting. One half of the 242 complaints investigated were useful for this study. Each complaint could contain any number of standards. The 180 behavioral standards were divided into nine categories pertaining to the role of the media, media effects, facticity, interpretation, fact-gathering procedures, reporting, presentation style, media knowledge base, public access. Several areas of divergence between public expectations as shown in the complaints and media codes of ethics were found. Among the differences are the following: the public thinks techniques are biased; the media, neutral and objective. the complainants assumed intentionality of errors, expressed a high concern for the quality of the knowledge base, and were sensitive to the logic of interpretations.

Neuman, Susan B. Television, reading, and the home environment. *Reading Research and Instruction*, Spring 1986, *25*, 173-183.

Explores the relation of home learning environment with children's viewing and leisure reading. From a survey of media habits of 122 fifth graders, 59 were identified as representing upper or lower quartiles in the following categories: heavy TV viewing-heavy reading; light TV viewing-heavy reading; light TV viewing-light reading; heavy TV viewing-light reading. A 93-item home environmental questionnaire, designed to measure parent-child interaction in seven categories (work habits, parental academic guidance, leisure activities, parental expectations, independence and responsibility, stimulation in the home, media behavior) was individually administered to parents. Responses were content analyzed using a clustering technique. Results were given in percentages. Television and reading behaviors were tied to a complex set of family patterns. Parents of children in the light reading-light viewing group tended to be less educated, less involved in the child's education, and less active in the community. Children who were heavy TV viewers and heavy readers tended to come from homes where parents were actively involved in many activities, including reading. Children appeared to internalize the media patterns and attitudes of their parents.

Radencich, Marguerite C. Role models of readers and writers in the youth media. *Florida Reading Quarterly*, June 1988, *24*(4), 11-15.

Examines whether role models of readers and writers appear in television, magazines, and newspaper comic pages. Six magazines whose circulation surpassed one million, three television programs of the largest viewing time, and entire pages of comic strips were analyzed. There were larger frequencies for writing models than for reading in magazines, the purpose for writing usually being for communication. *Cricket* had more reading and writing examples than did most of the other magazines. Television programs ranged from 20% to 100% featuring a character who read or wrote. Ten percent of the newspaper comic strips included examples of readers or writers.

Walker, James R. How viewing of MTV relates to exposure to other media violence. *Journalism Quarterly*, Winter 1987, *64*, 756-762.

Studies the relation of MTV viewing and exposure to other sources of violent content to assess the impact of MTV's contribution to mediated violence. Subjects were 116 seventh graders and 107 high school juniors who recorded their televiewing for one week and completed a questionnaire measuring their exposure to motion pictures and books during the previous two months. Television programs were classified into 11 types; motion pictures, 6 types; books, 4 types. Spearman's rank correlation coefficients were used to measure the relationship between MTV viewing and exposure to other forms of mediated violence. A clear trend for MTV viewing to be negatively related to exposure to other types of violent content in television, motion pictures, and books was found. Of the 13 significant correlations found for the two age groups, 11 were consistent with the inverse pattern. For the juniors MTV viewing was positively related to two types of romantic fiction: daytime soaps and romance novels.

JOHNSON, KIRK A. Black and white in Boston. *Columbia Journalism Review*, May-June 1987, *26*(1), 50-52.

Points out biases in mainstream coverage of blacks in the media. Some 3,200 news stories carried by six of the largest print and broadcast outlets in Boston as well as by four smaller black-owned outlets were analyzed. Appearing more frequently in the black news media were stories about education, city government, community events, and the arts. The major media emphasized crime or violent accidents in two black districts; the black media stressed a community eager for educational advancement and entrepreneurial achievement for the same districts. The evidence suggests that major media news about Boston's predominantly black neighborhoods is biased in the direction of commonly held stereotypes about blacks and the poor. Racism was not acknowledged as an underlying aspect even when stories dealt with injustices in the major media.

III-2 Content analysis of printed sources

BAKER, CAROLYN C., & FREEBODY, PETER. 'Constituting the Child' in beginning school reading books. *British Journal of Sociology of Education*, 1987, *8*(1), 55-76.

Analyzes 163 basal and supplementary readers currently in use in the first two years of school in a school district in northern New South Wales, Australia, plus new texts from major publishers. The concern of the analysis was to determine how the images of the child, as a character in the books and as reader of the books, are constructed. The methods used in the study include vocabulary counts, an account of membership categorization practices, and a description of the relation between narrator and characters' voices in the texts. The age and gender category memberships in the books were considered fundamental to the descriptions of social relationships and to the models of language, rationality, and social order, which the books convey. It was assumed that the texts were introductions concerning how children think, act, and talk.

RICE, IAN STRATTON. The portrayal of ethnic Chinese/Japanese peoples in Britain's primary reading schemes. *Reading*, April 1988, *22*, 32-39.

Examines 812 stories in 10 English reading schemes to determine the representation of ethnic Chinese/Japanese characters. White only characters appeared in 592 stories; animals or inanimate leading characters in 157; ethnic Chinese/Japanese in 8. The latter stories appear to rely on the strangeness and the differences of people and places. The illustrations tend to be racial stereotypes. Settings are all portrayed as rural, quaint, and exotic. None of the stories dealt with this ethnic group living in England. The antiquity of the tales is often stressed.

RICE, IAN. Racism and reading schemes. 1986, the current situation. *Reading*, July 1987, *21*, 92-98.

Examines the treatment of blacks in 10 reading schemes (graded readers) used by 196 schools in a large industrial city in northern England. In these books, blacks were under represented. When black people appeared, they were depicted in a stereotypical manner (as in the occupations they were engaged in). In the 10 schemes there were only five stories making an attempt to deal with the contemporary black experience in England. Examples were given of both covert and overt racism and tokenism in the stories and illustrations.

SMITH, HENRIETTA W. Missing & wanted: Black women in encyclopedias. *School Library Journal*, February 1988, *34*(6), 25-29.

Studies eight encyclopedia sets to determine their coverage of 27 black women, 23 of whom had been subjects in an earlier study by another investigator. The data on black women in encyclopedias were found to be limited; most of the past entries were not revised or updated in the 10-year interval. Of the five added women, only one received adequate coverage. Few photographs were included in the entries.

Prentice, Abbie Shuford. "One of us, one of us, we will make you one of us." In Malcolm P. Douglass (Ed.) *Claremont Reading Conference Fifty-First Yearbook*, 1987, 140-150.

Analyzes Caldecott Medal Award books from 1938 through 1983 to determine stimuli presented to children in picture books. Content was categorized under nine headings. It was concluded that these books show disturbing patterns in their portrayal of children, families, environments, and story endings. Few have ethnic minorities as characters. Of the 46 books analyzed, 43 had happy endings. Children were happy, clean, carefree, good. Circulation data from libraries in the Los Angeles County Library System revealed that recency of publication and ethnic composition of the neighborhood were not factors in the circulation of certain books. *Where the Wild Things Are* (1963) was the most circulated Caldecott book.

Arizpe, Víctor, & Aguirre, Benigno E. Mexican, Puerto Rican, and Cuban ethnic groups in first-year college-level Spanish textbooks. *Modern Language Journal*, Summer 1987, *71*, 125-137.

Evaluates 18 Spanish-language textbooks to determine how Mexican, Puerto Rican, and Cuban ethnic groups in the United States are treated. The textbooks were published between 1975 and 1985 and were introductory or first-year college Spanish textbooks. In prefaces the books were described as being culturally oriented. Whenever possible, several editions of the same textbook were analyzed. Four major categories of insufficiency were used to present the findings: inaccurate statements, stereotypes, oversimplification, omissions. Examples of each from the different books examined were included. It was concluded that authors should not be limited in what they wish to include in their books, but they should be accurate in what they present. An expanded treatment of culture in language books is needed.

Peters, William H. Historical and contextual influences related to the teaching of ethnic literature. *High School Journal*, October/November 1987, *71*, 9-13.

Makes an analysis of articles related to ethnic literature that appeared in the *English Journal* during 1960-1985. A limited number of articles appeared in the early sixties, followed by a sharp rise in the numbers in the late sixties and early seventies, with a considerable number in the seventies and only occasional articles in the eighties. The content ranged from the use of ethnic literature as works of art in the early years to an emphasis on a world view of ethnic literature in the early 1980s. Later fears were expressed that there will be a backlash swing to traditional literature. An analysis was also made of articles about the language of culturally deprived learners. Early articles argued for the acceptance of dialects; later articles were concerned about the scholarly study of dialects.

Barnett, Mark A. Sex bias in the helping behavior presented in children's picture books. *Journal of Genetic Psychology*, September 1986, *147*, 343-351.

Determines whether male and female story characters in children's picture books are depicted as helping boy and girl characters at different rates and in different ways. Eighteen college student readers reviewed a total of 1,537 picture books containing one or more child story character. A total of 801 helping acts were recorded from the 495 books containing at least one helping act. Helping acts were classified as instrumental (action performed) or expressive (feelings oriented response). Males were found to be represented more frequently than females both as child helpers and recipients of help. Although the helping acts in the books were generally rated as more instrumental than expressive, the helping acts of female nonhuman characters were rated more expressive than instrumental.

White, Hedy. Damsels in distress: Dependency themes in fiction for children and adolescents. *Adolescence*, Summer 1986, *21*, 251-256.

Analyzes plot summaries from 113 reviews appearing between March 11, 1983, and July 6, 1984, for kinds and frequency of male-female dependency acts in recent children's and adolescent literature. The analysis showed that both sexes were represented equally as main characters. Other characters mentioned were more likely to be male than female. At least one situation where a character helped another was found in 62 of the 113 summaries . Regardless of the context in which help was given, females were more likely to receive help, and males were more likely to give than to receive help. Males were more likely to provide emotional support or encouragement. Kinds of problems the characters needed help in solving were categorized into seven headings.

Hitchcock, Mary E., & Tompkins, Gail E. Basal readers: Are they still sexist? *The Reading Teacher*, December 1987, *41*, 288-303.

Analyzes six recent basal series for portrayal of females and compares the results with earlier similar studies. Examined were the 1st, 2nd, 5th, and 6th grade textbooks in each series, resulting in 55 books and 1,121 stories. Males were main characters in 18% of the stories, and females, 17%. More than three times as many stories were characterized as "other" (main character role being shared by both sexes or main character being a personified animal). Female main characters portrayed 37 occupations. Female main characters were most often children. The "other" category showed the most dramatic change from earlier studies; female occupations have become more varied.

Bailey, Angela. Sex-stereotyping in primary school mathematics schemes. *Research in Education*, May 1988, No.39, 39-46.

Analyzes three primary mathematics schemes in England, published between 1976 and 1982, to determine the extent of sex-stereotyping in the instructional materials at different grade levels. Males and females in illustrations and in problems were counted. In the three mathematics schemes together, far more men than women are found in both illustrations and in problems; men are shown in a far wider variety of jobs/careers than women. Women appear in 11 occupations; men, 30. Girls are shown in passive activities; boys, in strenuous ones. Materials do not become less sexist as children progress through any of the schemes from infant to top junior mathematics.

Nibbelink, William H.; Stockdale, Susan R.; & Mangru, Matadial. Sex-role assignments in elementary school mathematics textbooks. *Arithmetic Teacher*, October 1986, *34*(2), 19-21.

Analyzes contents of mathematics books for sexism in story problems for seven time periods, from the mid '30s to the late '80s. For each period the three textbook series with the widest use in Iowa were examined for grades 3-6. Sex roles were defined as those that prevailed in a typical Iowa community in the mid-sixties. This standard was used for all time periods. It was found that publishers became seriously concerned about sexism in mathematics books in the early '70s. From the mid '30s through the early '70s there were more problems showing persons in roles that are clearly male or female, but after this time there is a sharp decrease in such problems. It was concluded that publishers responded to the call for less sexist textbooks and that the response was a very safe one, offering minimal challenge to existing stereotypes.

Nilsen, Alleen Pace. Three decades of sexism in school science materials. *School Library Journal*, September 1987, *34*(1), 117-122.

Analyzes and compares 71 science books published in 1960, 1970, and 1980 for examples and extent of sexism. Points considered were illustrations, use of masculine pronouns, references to animals, exclusive language (common terms including a masculine marker as *freshman*), careers, and male figure as imagery. In general, progress was seen in reducing sexism in the science books examined, although more improvement is needed. Examples were included for each topic discussed along with suggestions for librarians.

TURK, JUDY VANSLYKE. Sex-role stereotyping in writing the news. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 613-617.

Replicates a study concerning gender bias in newspaper coverage of women and women's issues. Male and female reporters (12 graduate and 149 undergraduate students) in this quasi-experiment were given a packet of information about the appointment of a new superintendent of schools. One half were given the name of a man for the position; the remainder, a woman. Independent variable was the gender of the source. Dependent variables were personal or professional attributes and masculine, feminine, neutral attributes. The dependent variables were measured through content analysis of the news stories written by the subjects resulting in six categories of assertions. No statistically significant interaction effect was found between reporter gender and source gender on any of the dependent variable measures.

LEDER, GILAH C. Successful females: Print media profiles and their implications. *Journal of Psychology*, May 1986, *120*, 239-248.

Examines the ways outstanding women are portrayed by the Australian print media in 1982 and in 1984, the year the Anti-Sex Discrimination Act was passed. All articles focused on outstanding women in 200 Australian publications between January and July, 1982, and for the same dates in 1984. The 1982 sample included 58 females; the 1984, 50. The findings are discussed within the general framework of the expectancy value theory of achievement motivation with specific reference to the fear of success construct. In the 1984 sample there was a decrease in the number of honorary workers and women included because of their husband's achievement. The decrease in the number of homemakers was statistically significant. Fear of success imagery was found in 32 articles in 1982 and 39 in 1984.

ALMERICO, GINA M., & FILLMER, THOMPSON. Portrayal of older characters in children's magazines. *Educational Gerontology*, 1988, *14*(1), 15-31.

Examines 101 issues of 11 children's magazines, containing 2,186 stories, for the portrayal of older characters. A checklist of 24 categories grouped under four headings corresponding to the research questions was used to analyze the 123 stories containing older characters. Demographic differences were found between the portrayal in magazines and older people in the actual population in such areas as total representation; gender, racial, and ethnic composition; and financial status. No discrimination was found in personal traits of older people as mental capacity, personal appearance, distinctive features. The roles of older characters were developed through story involvement. They were shown to be active rather than passive 69% of the time. They were not blatantly discriminated against.

GUTKNECHT, BRUCE. Depictions of aging and the elderly in primary grade reading instructional material. *Reading Improvement*, Winter 1987, *24*, 230-237.

Analyzes 298 stories in the primary grade levels (K-3) of two basal reading series for their treatment of the elderly. This analysis included the frequency of main characters who were elderly, the quality of their characterizations in relation to other characters, incidence of aging themes, and incidental references to aging or the elderly. A data gathering instrument was developed and used for the analysis. The results showed that few positive depictions of aging and the elderly were present in the materials examined.

Fleming, Dan B., & Nurse, Ronald J. The war in recent U.S. history text books. *Social Education*, January 1988, *52*, 27-28, 32.

Analyzes 12 mid-1980s United States history textbooks for their treatment of the Vietnam War. The results were compared with those in a similar study in which books published in the late 1970s were investigated. It was concluded that the 1980 textbooks provided improved treatment of the war. In general, they pointed out U.S. errors, approached controversial issues, and discussed the costs of the war, particularly with respect to reexamining the role of the United States in the world. Textbooks ignored the culture of Vietnam and, because of space limitations, lacked depth in their coverage of specific topics.

Kallan, Richard A., & Denton, J.D. *People*'s people: An internal demographic analysis. *Mass Communication Review*, 1986, *13* (1,3), 40-43.

Analyzes nonfictional character portrayals and their demographic attributes in *People* magazine. Every fourth issue between March 11, 1974, and February 22, 1982, (n = 104) was analyzed. Demographics on 1,373 people from 1,285 articles in the main sections were collected and categorized. Almost 54% of the individuals were between the ages of 26 and 45. The vast majority (93%) possessed at least a high school diploma. Males appeared nearly twice as often as females. They currently live in eastern United States (39%) or western (31%). The most frequently represented occupations were business and entertainment.

Eyal, Chaim H. Sources of abstract and symbolic modeling: The presentation of social roles in two Israeli children's magazines. *Gazette*, 1986, *37*(1-2), 103-122.

Analyzes two Israeli magazines to determine if they portray social and professional roles in different ways and assesses whether any such differences could be attributed to differences in political and ideological orientations. Twelve issues of each magazine in 1980 were analyzed, resulting in 1,098 stories being examined. The stories were coded into eight classifications of attributes and characteristics. Rank-order correlation coefficients (Rho) and tests of differences were used to analyze data. Significant differences were found between the two magazines. The major conclusion was that the political identity of *Mishmar Li'Yladim* manifested itself on two general levels: emphasizing particular social roles as important and central in society, and emphasizing sociopolitical involvement and participation. In *Ha'aretz Shelanu* the emphasis appeared to mirror and represent a societal norm or trend. In the first magazine readers find a world dominated by political figures side-by-side with lesser important ones. In the latter magazine readers find a world in which military roles are highly salient, followed by artists and politicians.

Stanfield, Douglas W., & Lemert, James B. Alternative newspapers and mobilizing information. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 604-607.

Investigates the use of mobilizing information, defined as any kind of information that helps people act on the attitudes they already have, in two alternative newspapers and two dailies. The alternative newspapers, one an activist and the other issue-centered, were matched with dailies in their cities for 1979, the year that circulation and revenues were the strongest for one alternative newspaper no longer in operation. Locally written stories about public affairs controversies were examined in 22 issues of each paper. All stories, except features, were examined in the alternative papers and eligible stories on the front page and metro sections in the dailies. Mobilizing information was determined by locational, identificational, and tactical qualities. Almost 40% of the activist newspaper's articles had mobilizing information. The other alternative paper had less than the two mainstream dailies.

Wolverton, David O., & Vance, Donald. Newspaper coverage of proposals for rate increases by electric utility. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 581-584.

Analyzes newspaper clippings concerned with an electric company's rate increases for three different years. News articles, editorials, and letters to the editor were rated as favorable, unfavorable, or neutral; counted; and measured in column inches. The highest, middle, and lowest size rate increases received the most, middle, and lowest instances and amount of space in news articles and editorials and the lowest amount of space for letters to the editor, as hypothesized. News articles were predominantly impartial. Editorials were largely unfavorable, but the largest rate increase was not related to the amount of rate requested.

LAAKANIEMI, RAY. Written by pros, read by amateurs: Analysis of trade speeches on improving newspaper content. *Newspaper Research Journal*, Fall 1987, *9*(1), 31-40.

Questions what newspaper officials say should be done to improve newspapers. Speeches given at national conventions with titles suggesting improvement of newspaper content and available in print were analyzed during a five-year period. The unit of analysis was the "mention," defined as a suggestion for improvement given at one time during a speech. The 251 mentions for the 38 relevant speeches were grouped into three major categories: understanding the audience (63, 25%), understanding the nature of news (104, 41%), and newspaper attitudes (63, 25%). The remaining 21 items were classified as miscellaneous. Each category was subdivided, the one subdivision most often mentioned was to know the newspaper audience better.

DeRIEMER, CYNTHIA. Education coverage in award-winning and non-award-winning newspapers. *Journalism Quarterly*, Spring 1988, *65*, 171-177.

Analyzes 3,116 education news stories randomly selected from five award winning and five non-award winning newspapers in relation to 12 hypotheses. Both sets of newspapers were compared on their coverage of education news during a three-year period. The 1,810 newspaper issues studied resulted in 3,116 stories which were coded into 21 categories. Award winning newspapers did not publish more education stories, did not give education news larger headlines or higher page placement, did not cover a variety of education levels nor primarily concentrate on local news stories. They published longer news stories on the average and used locally bylined and wire service copy to a significantly greater degree. There were few significant differences between the two groups of newspapers in general topics covered.

RAMAPRASAD, JYOTIKA, & RIFFE, DANIEL. Effect of U.S.-India relations on New York *Times* coverage. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 537-543, 663.

Examines the relation of American government policy toward India and the coverage of India in the New York *Times* between 1973 and 1980. This period was selected because it was characterized by alternating periods of tense and relaxed relations. The time period was divided into four policy periods representing changes in the U.S. policy towards India. The constructed week sampling technique was used, with one sample week for each month in the 8-year period, creating a total sample of 653 issues. All items on India (653) were coded for slant (favorable, neutral, unfavorable), positive or negative topic, and prominence. Analysis of variance and t-tests were used. Changes in mean length and prominence scores over the four foreign policy periods were not significant, suggesting independence of coverage from government policy towards India.

MOUSA, ISSAM SULEIMAN. The Arab image: The New York *Times*, 1916-1948. *Gazette*, 1987, *40*(2), 101-120.

Analyzes the Arab portrayal in the New York *Times* during 11 time periods between 1916 and 1948. Attention was focused on the Arab activities of conflict and cooperation, relationships with other nations, and favorable, unfavorable, and neutral coverage. News reports were analyzed for seven categories of themes. Coverage was primarily event-oriented and conflict-oriented. Coverage was primarily unfavorable. High conflict and unfavorable treatment of the military and political contexts were emphasized. Information was considered limited. Coverage gave information about some Arabs, but not all of them; emphasized mostly political, military, and economic contexts; and emphasized conflict.

SUMSER, JOHN. Labels used to define Central American situation. *Journalism Quarterly*, Winter 1987, *64*, 850-853.

Analyzes for key concepts (labels) 69 articles from the New York *Times* and 13 from the New York *Post* in a sample of newspapers for 27 days. All stories in the first section with headlines referring to Central America or any Central American country were included in the analysis. Key words were checked off on the code sheet and linked by lines to words with which they were associated. This procedure made it possible to see the frequency of the term and to trace the modifying context. Key labels were divided into those which concerned governments and those which defined the individuals involved. Nicaragua is considered a political party which lacks the ability to protect itself and which is under attack by rebels, El Salvador is always referred to as a nation or a government with a competent military capable of resisting the guerrillas.

BARRANCO, DEBORAH A., & SHYLES, LEONARD. Arab vs. Israeli news coverage in the New York *Times*, 1976 and 1984. *Journalism Quarterly*, Spring 1988, *65*, 178-181, 255.

Analyzes 60 New York *Times* issues to determine if subtle news bias exists in respect to its coverage of Mideast issues. Headlines were the unit of analysis for 30 issues from each 1976 and 1984. The 309 articles analyzed focused on the Mideast. Two kinds of analyses were used: frequency of each of the 10 Mideast country's appearance in the headlines and a primary and secondary focus to see if Israel and America were featured significantly more often than other Arab nations. In both years the frequencies of mentions attributed to Israel and the United States were significantly greater than those attributed to Arab nations. Almost 40% of Mideast mentions across both periods were devoted to Israel and the United States. Lebanon was mentioned more than any other Arab nation.

MARLIN, CHERYL L. Space race propaganda: U.S. coverage of the Soviet Sputniks in 1957. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 544-549, 559.

Analyzes Soviet Sputnik coverage by *Time*, *Newsweek*, and *U.S. News and World Report*, from September through December, 1957. A total of 155 items covering the two Sputniks was found, 36 being from the tidbit sections of *Newsweek* and *U.S. News*. *U.S News* tended to concentrate its coverage of each event in one issue; *Newsweek* and *Time* extended their coverage of each event over at least two issues before falling off. *U.S. News* headlines were Space Race-oriented, stressing the idea that the United States must not lose. Russian achievements were minimized. The real race was not one of rockets going into space; it was ideological between capitalist and Communist ways of life. *Newsweek* is described as enchanted with space exploration and started a new section entitled "Space and the Atom." *Time* showed little initial excitement over the space race, attempting to avoid spotlighting the Russians.

MCCOMBS, MAXWELL. Effect of monopoly in Cleveland on diversity of newspaper content. *Journalism Quarterly*, Winter 1987, *64*, 740-744, 792.

Replicates a study conducted in Montreal and Winnipeg with an identical content analysis of two Cleveland newspapers. Issues were randomly sampled from September, 1980, and 1983, to form constructed weeks. Two comparisons were made. To test the influence of competition on diversity of newspaper content, the 1980 issues were compared. To test the influence of monopoly versus competition on newspaper content, the 1980 issues of one newspaper were compared with its 1983 publication, a before-and-after the demise of competition comparison. The two Cleveland competitors presented similar news; the number of news stories, items on the editorial page, features of various types, and items classified under 11 categories appearing in a typical week were very similar. After the suspension of one newspaper, the other newspaper remained essentially the same.

Ramaprasad, Jyotika. Pre-, during and post-censorship coverage of India by the New York *Times*. *Newspaper Research Journal*, Fall 1987, *9*(1), 19-29.

Analyzes 423 items on India from 401 issues of the New York *Times* in the period before (January, 1974 to June 25, 1975), during (June 26, 1975 to March 20, 1977), and after (March 21, 1977 to December 31, 178) the emergency/censorship period. Each item was coded twice, once for slant (favorable, unfavorable, neutral) and a second time for content categories, which in turn were classified as positive or negative. The *Times* carried more unfavorably slanted (65%) than favorably slanted (35%) and more negative topic (56%) than positive topic (44%) items. No differences in coverage in terms of slant and topics were found over the three periods.

Smith, Kim A. Growth and conflict reporting in one community from 1945 to 1985. *Journalism Quarterly*, Winter 1987, *64*, 820-825, 833.

Examines changes in newspaper coverage over a 45-year period in a community that grew from an agricultural to an important urban center. A random sample of 1,230 editions (30 per year) of the city's only newspaper from 1945 to 1985 was content analyzed. Each front-page article was coded in three ways: as local or nonlocal, into one of 21 content categories, and kind of conflict, if any. As the community became more pluralistic, the percentage of local stories increased from about 13% to almost 56%. There was a steady increase in conflict reporting from about 2% to around 20%. The percentage of articles reporting conflict increased for 15 of 17 topics, decreasing only for the housing and social service topics.

Tsang, Kuo-jen; Tsai, Yean; & Liu, Scott S. K. Geographic emphases of international news studies. *Journalism Quarterly*, Spring 1988, *65*, 191-194.

Examines 152 articles from 14 sources published between 1970 and 1986 to determine types of geographic approaches most often used and geographic areas most frequently examined. News stories were classified into six types of geographic approaches and intensity (host country whose media are examined and guest country, the country being covered by the media in the host country). Almost half of the research (46%) dealt with world news in a single country, especially the United States. Studies on news flow, across countries, were also emphasized (29%). In regard to guest countries, general world news was studied most frequently (53%) with news about Asian and Middle Eastern countries comprising one-fifth of international news.

McDevitt, Mike. Idealogical language and the press: Coverage in inaugural, State of the Union addresses. *Mass Communication Review*, 1986, *13*(1-3), 18-24.

Compares the ideological content of the State of the Union and inaugural addresses from 1973 to 1985 to newspaper accounts of these addresses. Main news accounts in five metropolitan newspapers were analyzed. The unit of analysis was the ideograph, word that is abstract and refers to traditional normative goals. Materials were analyzed for 16 ideographs. Newspaper accounts of the addresses contained fewer ideographs per number of words than the addresses themselves. There was a mean of 4.3 ideographs per 1,000 words in the articles compared with a mean of 7.3 in the addresses. More ideographs were found in inaugural addresses than in State of the Union ones. The ideographs used the most by the four presidents, but not in the same ranking, were peace, freedom, progress, and opportunity.

Algraawi, Mbark A., & Culbertson, Hugh M. Relation between attribution specificity and accessibility to news sources. *Journalism Quarterly*, Winter 1987, *64*, 799-804.

Focuses on elite-newspaper coverage of two comparable airplane tragedies about 10 years apart (Libyan civilian plane, 1973, and Korean civilian plane, 1983). The aim was to determine if attribution to news sources from democratic nations was more detailed and specific than that to states having controlled press systems. In the Libyan case, attributions to Israeli sources were compared with those to persons and groups in Arab states; in the Korean tragedy, quotes from American and South Korean sources were compared with those of the Soviet Union. Newspapers analyzed were the New York *Times*, Washington *Post*, and London *Times*. All articles in the 12 issues of each daily paper following the crash were coded. The paragraph was the unit of analysis. Israeli sources provided more names than Arab sources, but not significantly so. American/Korean sources provided names significantly more than Russian sources did. Higher percentages of paragraphs with veiled attribution on Israeli sources than to Arab sources and of American/South Korean sources to Russian sources were found. It was concluded that limitations placed on news source accessibility by societies with controlled press systems may reduce attribution specificity when compared with nations which emphasize press freedom.

Howenstine, Erick. Environmental reporting: Shift from 1970 to 1982. *Journalism Quarterly*, Winter 1987, *64*, 842-846.

Assesses trends in environmental coverage in two newspapers and two news magazines during two one-year periods more than a decade apart. News sections and editorials yielded at least 50 qualifying articles for each medium/year combination. Each paragraph was classified as environmental, economic, political, technological. The environmental or economic bias for each story was recorded on a Likert-type scale. Stories were categorized according to types into one of five categories. Analysis of variance was used to evaluate differences among the publications. Between 1970 and 1982 environmental stories became longer and were less concerned with preservation/degradation issues and more concerned about economic issues. It was concluded that there appears to be a shift by the nation's leading periodicals to present environmental news in more meaningful ways.

Bucholz, Michael. Social Responsibility of the Texas revolutionary press. *Journalism Quarterly*, Spring 1988, *65*, 185-189.

Examines 65 surviving issues of three Texas newspapers published between July 5, 1834, and August 30, 1836, to determine their approaches to issues related to the revolutionary period in Texas. The 638 articles about local affairs were classified into seven issue categories and by positions taken. It was concluded that these newspapers took different positions on the issues studied, with some issues receiving more balanced treatment than others. There was a consensus about support of resisting Mexico and opposition to land sales and calls for revolution and armed resistance to Mexico.

Caudill, Ed. A content analysis of press views of Darwin's evolution theory, 1860-1925. *Journalism Quarterly*, Winter 1987, *64*, 782-786, 946.

Questions if patterns in coverage of Darwin's theory of evolution changed between 1860 and 1925. The *New York Times Index* and *The American Journal of Science* were the major sources for the quantitative part of the study. The total number of articles about Darwin and evolution in both publications was conservative. Three other newspaper sources were used to provide examples of substantive change in coverage. Even though press opinions about the theory changed, the orientation of the press to conflict did not. The conflict changed from the challenge of evolution to religion, to the challenge of religion to scientific fact. Events and attitudes affecting the changes are described.

Schillinger, Elisabeth, & Jenswold, Joel. Three Olympiads: A comparison of *Pravda* and the Washington *Post*. *Journalism Quarterly*, Winter 1987, *64*, 826-833.

Examines *Pravda* and the Washington *Post* for their coverage of the Olympic games in 1976 (Montreal), 1980 (Moscow), and 1984 (Los Angeles). For 17 days the press coverage in both papers was analyzed to determine the extent of national bias included, the frequency of reporting the games, and the prevailing direction of coverage (positive, negative, or neutral). During the three Olympiads the *Post* published 1,112 items; *Pravda*, 211. The *Post* was nationalistic in tone and proved to be more partisan in its coverage of the Moscow and Los Angeles games than in the less controversial Montreal games. The apparent contradictions and inconsistencies in *Pravda*'s coverage reflected news politicized in a different way. Values carrying a collective orientation, that of benefits for all, resulted in *Pravda*'s efforts to tie together the interests of the Soviet state, Olympic competition, and international peace. *Pravda*'s coverage revealed greater extremes and more dramatic reverses than the *Post*'s. The coverage in both papers is analyzed for each of the Olympic games.

Romanow, Walter I., & Soderlund, Walter C. Thomson Newspapers' acquisition of *The Globe and Mail*: A case study of content change. *Gazette*, 1988, *41*(1), 5-17.

Determines whether change of ownership of the Canadian newspaper, *The Globe and Mail*, was followed by changes in the content of the paper. Front, editorial, and the op. ed. pages were analyzed for a 4-year period immediately prior to and 4 years after the change of ownership from one chain to another. Six types of content were identified: front page leads, all other front page news stories, editorials, features, editorial cartoons, and letters to the editor. Of the 2,648 items, an equal number appeared before and after the turnover. There was virtually no evidence of change in the content of the three pages analyzed. There was evidence of only one change: reduction of Toronto news and an increase of national and international news. These changes were not particularly sharp.

Shaochang, Qian. *People's Daily* and *China Daily*: A comparative study. *Gazette*, 1987, *40*(1), 57-68.

Compares two Chinese newspapers, *People's Daily* and *China Daily*, for news presentation and newspaper design. Both are national papers, the former being the official newspaper of the Communist party and the latter being China's only foreign newspaper (English) intended mainly for western readers in and outside China. A random sample of March, 1985, was analyzed for both papers. *People's Daily* focussed on domestic problems and devoted much space to speeches of the Party, government leaders, and Party documents. *China Daily* had more business and sports coverage, more features describing Chinese culture and life style, bigger and more interesting pictures, more comics, ads, and entertainment then *People's Daily*. Both were careful in covering China's foreign relations and did not express views different from those of the Party.

Okigbo, C.C. News flow imbalance: Quantifications of Nigerian press content. *Gazette*, 1985, *36*(2), 95-107.

Determines the nature of foreign and local news coverage in five Nigerian newspapers. A random sample of 14 issues of each newspaper selected in two stages yielded 2,178 stories written in approximately 519,700 words. Stories were coded for topic, locality, locational focus, favorability, length of story, page placement, and lead style. They were classified under 14 topic categories. Of the total sample, 32.1% were foreign news stories and 67.9%, Nigerian. Of the latter, 83.5% were set in big cities and 6.5% were in rural areas. Third World countries were represented by 87.6% of the stories. In the topic categories, politics led with 24.2%, followed by government activities, 13.4% and economics, 12.7%. Of the 700 foreign stories, 25.9% were favorable; 49.3%, unfavorable; and 24.8%, neutral.

Madden, Charles S.; Caballero, Marjorie J.; & Matsukubo, Shinya. Analysis of information content in U.S. and Japanese magazine advertising. *Journal of Advertising*, 1986, *15*(3), 38-45.

Compares Japanese and American magazine advertisements to determine relative levels of information content, the product represented in the advertisement, and the size of the advertisement. Six categories of magazines (general, sports, entertainment, women's, men's, and professional) for May/June 1984 yielded a total of 1,440 advertisements, 832 being American and 608 being Japanese. Three judges noted whether each advertisement was informative or noninformative and which of 14 criteria were satisfied by the advertisement. More than 85% of the Japanese advertisements satisfied at least one criterion for informative content, compared to 75% of the American ones. The same five informational cues were most often used in ads from both countries, but ranked differently: price, availability, performance, components, and special values. Japanese magazine advertising was consistently found to be more informative than that in the United States across the number of criteria applied, the number of cues per ad, and various ad sizes.

Sullivan, Gary L., & O'Connor, P.J. Women's role portrayals in magazine advertising: 1958-1983. *Sex Roles*, February 1988, *18*, 181-188.

Survey women's role portrayal in magazine advertisements. Occupational representations of working women, activities of nonworking women, and role portrayal by product category were tabulated and compared statistically with findings of similar studies published in 1958 and 1970. Six of eight magazines surveyed were analyzed in the earlier studies. Two replaced those no longer published. In the 364 advertisements appearing in November, 1983, issues more men (380) than women (240) were shown. A marked increase in the employment status of women, especially in professional, sales, and mid-level business occupations, was found. It was concluded that contemporary advertisements capture better the diversity of women's roles than the earlier ones did.

Caudill, Susan; Caudill, Ed; & Singletary, Michael W. 'Journalist Wanted': Trade-journal ads as indicators of professional values. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 576-580, 633.

Examines the hiring practices of journalists in ads in *Editor & Publisher* in the decade years of 1920, 1940, 1960, and 1980. Beginning with the first issue of each decade year, 100 help wanted editorial ads were coded for each year and placed in 18 content categories. The foremost quality sought by newspaper recruiters was experience in both 1920 and 1980, followed by salaries, editorial skills, and values. Little change was found in the different time periods.

Okigbo, Charles. Death and funeral ads in the Nigerian press. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 629-633.

Analyzes obituary and in memoriam ads appearing in two national Nigerian newspapers between November, 1983, and February, 1984. The most conspicuous content of Nigerian newspapers is the various announcements of deaths and funerals that sometimes claim half of the newspaper space. Although the obituaries contain vital information, they are essentially advertisements. From a study of 28 selected obituary announcements, six kinds of content were found: humor, ambiguity, enmity, adulatory statements about the bereaved, statements addressed to the deceased, statements that reflect enmity or suspicion. Examples of each are included in the report.

Soley, Lawrence C., & Reid, Leonard N. Advertising article productivity updated. *Journalism Quarterly*, Spring 1988, *65*, 157-164.

Analyzes three advertising, three communication, and three marketing journals between 1981 and 1985 for characteristics of authors of advertising articles and compares the findings with an earlier study. The 503 articles were coded for author institutional affiliation, author discipline, and author rank. More than 75% (379) were published in advertising journals with the remainder almost evenly distributed between communication and marketing journals. Of the 903 authors, 22.9% were practitioners and 74.7%, academicians. Of the latter, marketing faculty authored the most articles, followed by communication and business faculties. The 20 universities whose departments contributed the most are listed. Some changes from the earlier study were noted.

III-3 Readability and legibility

HANDELSMAN, MITCHELL M.; KEMPER, MELINDA B.; KESSON-CRAIG, PAMELA; MCLAIN, JOANNE; & JOHNSRUD, CYNTHIA. Use, content, and readability of written informed consent forms for treatment. *Professional Psychology: Research and Practice*, December 1986, *17*, 514-518.

Uses the Flesch and Fry formulas to determine the readability of consent forms used by psychologists. Of 104 who completed a questionnaire, 30 reported using consent forms. Nineteen sent their forms to the researchers. The mean Flesch score for the 16 usable forms was 41.79, in the difficult range. The mean and median grade level from the Fry was 12.5 with a range of 7.0 to 17+. A content analysis of these forms revealed the most common topics were financial issues and confidentiality and its limits, not with information concerning risks of treatment or alternative treatments. Readability tests were also applied to a model contract (difficult), a model brochure (very difficult), and consent forms from one private and five public mental facilities (difficult).

BLUMENFELD, WARREN S. Appropriateness of readability of a federal aviation agency regulation, a flight crew manual, and a company-pilot labor agreement for an airline's pilots. *Perceptual and Motor Skills*, December 1985, *61*, 1189-1190.

Determines readability of a Federal Aviation Agency regulation, an airline crew manual, and a company-pilot labor agreement for an airline's pilots. Control documents were also tested for readability with control readerships being personnel managers and the United States population. FOG readability indices were developed; readership reading level was estimated from education. Empirical data were obtained from airline records for pilots (n=251), from an American Society for Personnel Administration survey for a hypothetical sample of personnel managers (n=50), and from a national survey for a hypothetical sample of United States population (n=50). Analyses of variance did not confirm the appropriateness of regulation or agreement for pilots (too difficult) but did confirm the appropriateness of crew manual for pilots.

BOHLE, ROBERT H., & GARCIA, MARIO R. Reader response to color halftones and spot color in newspaper design. *Journalism Quarterly*, Winter 1987, *64*, 731-739.

Inquires whether readers like color in newspaper design and how it affects their eye movements. Fifteen different versions of a front page, six of a lifestyle page, and three sports fronts of a newspaper were printed all with identical content but different in the kind and amount of color used. Interviews were conducted with 83 subjects in three scattered locations. Each interview took between 25 and 40 minutes. In the eye movement test the subjects identified where their eye fell first, second, and after that on 15 pages, one at a time. Opinion towards the paper were tested by a set of 20 word pair semantic differential scales and a paired comparison test concerning five front pages ranging from black and white to a bright color. In most cases subjects' eyes first fell on the main photo (color or black and white), but color was a strong influence on eye movements. Color did not affect greatly how readers felt about the ethical quality of the paper nor their impression of the paper's importance. Color makes a paper appear more pleasant and powerful.

Crawford, Alistair. Bilingualism and visible language: Bilingual typography. *Visible Language*, Winter 1987, *21*, 42-65.

Argues that typography should be language-based. Printed Welsh, a minority language with no typographic history, was used as an example. The solution to the problem of designing for multilingual texts rests in the need to produce language-based typographic systems. The setting of a typeface in a language for which it is not primarily designed demonstrates that the slightest modification in the shape and style of the typeface used can either aid or deter the legibility and readability of the language used. No two languages have the same visual shape. The relationship of frequency and sequence produces the visual appearance of a language. These visual characteristics determine the shape and style of typeface. Examples are given for suitable and unsuitable typeface for the Welsh language accompanied by explanations.

III-4 Reading interests, preferences, habits

Wyett, Robert O., & Badger, David P. To toast, pan or waffle: How film reviews affect reader interest and credibility perception. *Newspaper Research Journal*, Summer 1987, *8*(4), 19-30.

Assesses subjects' interest in positive, negative, and mixed film reviews and their perceptions of review credibility. A nonreview containing no evaluative adjectives served as a control. The 318 college students read eight film reviews, including the experimental one, and rated their interest in seeing each one. They read one of four review treatments of the experimental one and rated it for interest, informativeness, and credibility. Different statistical procedures were used to test the hypotheses. Positive reviews and nonreviews were found significantly more interesting than mixed reviews and negative reviews but not significantly more credible.

Strongoli, Maria Thereza. Brasil. Books and reading in a developing country. *International Research in Reading*, Winter 1987, *4*(1), 14-19.

Is concerned with memories of stories heard, books read, and circumstances involving reading, both in childhood and in youth, at the beginning of the century and now. Data were obtained from 287 subjects in Sao Paulo, Brazil. Subjects were placed into one of eight groups according to sex, age bracket (60 to 79, 15 to 20 years of age), higher and lower social origins (defined according to the father's profession and classified on the Hutchinson Scale). A great number had pleasant memories of fairy tales, and stories of witches, princesses, ghosts, and souls from another world. Schools early in this century differentiated education for boys and girls, but there is less differentiation and more freedom today. All felt that reading afforded more than pleasure, but they reported spending more time watching television than reading.

III-5 Readership

Locke, Jill L. Pittsburgh's Beginning with Books project. *School Library Journal*, February 1988, *34*(6), 22-24.

Presents preliminary data on the evaluation of the Beginning with Books project. The project started in 1984 by providing 1,000 packets of books to be distributed to families in waiting rooms of Well Baby Clinics. At the time of distribution, a short interview was conducted; a follow-up questionnaire was given after six months. The youngest child in each family between the ages of 1 and 5 was considered the target child. At the time of the present report, 395 follow-up questionnaires had been returned. Only two families reported that they had not looked at the books with their children. Before receiving the packet, 9.4% of parents reported that they had never read to the child in question and 47% reported reading to the targeted child once a day or more; after receiving the books, 69% of parents reported that someone read to or looked at the books with the child at least once a day or more. The program now serves over 3,600 families.

Whyte, Jean. The usefulness of literacy for 11 and 12 year-olds. In *Proceedings of the Eighth Annual Conference of the Reading Association of Ireland*, 1983, 30-38.

Asks 149 11-year-olds and 284 12-year-olds in Dublin and London if they read the newspaper, what else they read, and if they write letters. At age 11 there is considerable similarity between girls and boys in the percentage of those who read different kinds of newspapers; by age 12 more girls appear to read tabloids while more boys read weeklies. More girls than boys showed an interest in general news stories. The vast majority of children read books outside of school, at least sometimes. Most belonged to a library, read comics, and owned some books. A wide range of reading tastes and abilities was found.

Stone, Gerald. Measuring adult readership potential of the Newspaper in Education program. *Newspaper Research Journal*, Winter 1988, *9*(2), 77-86.

Reviews the limited number of studies related to the influence of the Newspaper in Education program on later newspaper readership. This research has been limited by the complexities of tracing longitudinal effects and by methodological difficulties in past research design. From these studies it was concluded that students participating in any newspaper-in-the-schools experience have less trouble reading newspapers, enjoy reading them more, and are likely to be current newspaper readers. Their interest in hard news is likely to increase, and they become more interested in public affairs. The evidence shows that classroom newspaper exposure is a positive substitute for not having a newspaper at home when growing up.

Rarick, Galen R., & Lemert, James B. Subscriber behavior and attitudes one year after PM-AM conversion. *Newspaper Research Journal*, Spring 1988, *9*(3), 21-30.

Assesses media behavior and attitudes toward media three times after an afternoon newspaper was converted to a morning one. The findings of the last two are compared here. In the second phases, 256 adults were interviewed three to four weeks after the change; in the third, 175 a year later. Most of the change occurred in the first few weeks in both newspaper reading and television news viewing. In a few cases the change continued in the same direction the following year; in no case was there a reversal in change. Almost a year later half of the subjects were reading the paper in the afternoon. The total amount of time spent reading the paper dropped during the first few weeks and did not change after that. Blue collar workers were less accepting of the morning paper than were other people.

Stone, Gerald. Do dual subscribers differ from single subscribers? *Newspaper Research Journal*, Spring 1988, *9*(3), 31-47.

Reports a secondary analysis of a single-market survey that contrasted dual subscribers to morning-evening sister newspapers with residents who subscribed to only one of these newspapers. The methodology was a random sample telephone survey of subscribers to the afternoon newspaper which included 926 completed calls in the first wave, 730 in the second, and 546 to the subjects after nearly one year. The results of the comparison of the two groups of subscribers found they were similar on virtually all traits and media use habits. Single subscribers did have a psychological commitment to their paper not shared by dual subscribers. The two groups were not demographically different nor did they have different information interests.

Ruotolo, A. Carlos. A typology of newspaper readers. *Journalism Quarterly*, Spring 1988, *65*, 126-130.

Uses 15 motives for reading newspapers to profile newspaper readers in terms of types. Each type is defined by the clustering of motives that apply to readers sharing a common motivational orientation. Statements representing the motives were combined in a structured Q-sample and administered to 56 newspaper readers in Brazil. Five factors representing five types of readers resulted from factor analyzing Q-sorts. Four types of readers which correlated among themselves included instrumental readers, opinion-makers, ego-boosters, and scanners. The fifth type was pleasure readers. Each type is described in the report.

Tichenor, Phillip J.: Olien, Clarice N.; & Donohue, George A. Effect of use of metro dailies on knowledge gap in small towns. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 329-336.

Studies the impact of a metropolitan daily newspaper as a source for knowledge of local and/or regional issues in two areas in Minnesota. Data are from two different telephone survey studies, each involving issues of outlying communities which were covered in both local papers and in one or more of the city papers circulating in those communities. Each study involved simultaneous surveys of a regional community served by a daily and a smaller rural community with a weekly paper. Subjects were asked about the issues and the source of their information. In the first study with a single issue involved, the measure of knowledge was the number of accurate statements given; in the second, with several issues involved, the number of local issues. Individuals using metro daily newspapers as sources of information generally had higher levels of knowledge than those using regional or local papers alone. The impact of the metropolitan newspaper on knowledge was more pronounced in small communities served by weekly local papers than in regional centers served by small dailies. In communities with weeklies, the contribution to knowledge of the issues is greater than the contribution of television.

Tichenor, Phillip; Donohue, George C.; & Olien, Clarice. Is newspaper reading related to where people shop? *Newspaper Research Journal*, Fall 1987, *9*(1), 61-71.

Analyzes how newspaper reading in varying community structures is related to where people shop. Telephone surveys were conducted in 10 Minnesota communities representing a small, rural, and homogeneous community; an outlying regional center in the process of urbanization; a metropolitan core city area; a group of suburbs. A sample of 100 or more persons in each community answered questions about reading the local paper and community they usually go to for food, nonfood items, recreation, health needs, and repair work. Differences were found among communities concerning where people say they shop. Various relationships were found, indicating people's use of the newspaper for shopping is associated with community change and development. None of three background factors (education, age, community identity) was related to shopping services.

Lipschultz, Jeremy Harris. The nonreader problem: A closer look at avoiding the newspaper. *Newspaper Research Journal*, Summer 1987, *8*(4), 59-69.

Questions why some people do not read newspapers. A total of 408 persons were questioned by telephone about their newspaper usage. Three groups were established from two sets of responses: nonreaders (55), casual readers (119), regular readers (229). The subjects responded on a 3-point scale (apply a lot, somewhat, or not at all) to 12 avoidance statements. Analysis of variance was used to test for significant differences between readers and nonreaders on these items. On six items nonreaders were significantly different from both groups of readers: use of radio-television, cost, usefulness, interest, trust, and the amount of detail. Casual readers were different from regular readers on taking too much time to read the newspaper. Education and age provided limited explanations about demographic differences between readers and nonreaders; gender, urban/rural status, employment, marital status were not significant in explaining differences. Factor analysis was used to construct cognitive patterns among avoidance items for the three readership groups.

RIFFE, DANIEL. Comparison of media and other sources of information for Alabama legislators. *Journalism Quarterly*, Spring 1988, *65*, 46-53.

Examines how the news media compare to other sources for legislators, professional and nonprofessional information needs. Sources included several news media; colleagues and fellow legislators; special interests groups or lobbyists; volunteer or nonprofit groups; and family, friends, and nonprofessional contacts. The 82 legislators who completed the questionnaire indicated on a 5-point scale the extent to which the above choices provided information for each of five situations. As hypothesized, subjects selected statehouse insiders for state government news; news media for news of both local and world events; and family, friends, and nonprofessional contacts for personal matters. Most sources were rated "not useful" for job decision information; all eight sources were considered useful for information on constituent concerns and general public opinion.

TOWERS, WAYNE M. Uses and gratifications of magazine readers: A cross-media comparison. *Mass Communication Review*, 1986, *13*(1-3), 44-51.

Tests the appropriateness of gratifications research to two types of magazines: weekly news magazines and general circulation magazines, ranging from *Popular Mechanics* to *Playgirl*. A total of 543 adults were interviewed concerning media usage and agreement with 14 gratification statements. Agreement was measured on a 5-point Likert-like scale. Data were analyzed by principal components, varimax rotated factor analysis and discriminant analysis. Factor analysis identified the expected three dimensions: diversion, surveillance, interaction. News magazine subscribers tended towards surveillance for big news events and for the interaction of passing information along. Single copy buyers preferred more information on particular events ($< .10$ level). Consumer magazine subscribers were related to passing time and diversions of lifestyle quality.

III-6 Library usage

RASH, CAROL-JEAN. A study of adequacy and use of elementary school libraries and classroom collections by Idaho Intermediate teachers. *Idaho Reading Report*, Spring 1987, *14*(3), 1,3.

Surveys 503 intermediate grade school teachers and librarians in Idaho concerning reading practices and the use of elementary school and classroom libraries. Ten highlights from the 72 responses to the librarian survey and 11 from the 434 responses to the teacher survey were included. The most important identified needs included those for more certified librarians, more books in the central libraries and classroom libraries, and more adequate physical housing for school libraries.

WESTERHEIN, INGEBORG. Young people and the library. *Scandinavian Public Library Journal*, 1986, *19*(3), 107-108.

Presents data on the use of the library by various age groups in Norway and compares those data with usage in Denmark and England. Also presents percentages of individuals in Norway who used the public library services for various purposes. Across all three countries, younger people used the library more. Percentages of the total population using the public libraries were 24% in Norway, 47% in Denmark, and 49% in England. In Norway, 35% of young people ages 16-24 used the library, with the percentage dropping to 14% for the 65-74 year old age group. In Denmark, 70% of those ages 16-19 used the library with 34% in the 60-69 year old age group doing so. Among 15-19 year olds in England, 69% used the library; for 65 and up, 32% used it. Figures in Norway for percentages of the total population using library services in various categories were: nonfiction, 12%; fiction, 18%; reference works, 6%; periodicals/magazines, 6%; and information services, 12%.

Al-Nahari, Abdulaziz Mohamed. *The Role of National Libraries in Developing Countries*. New York: Mansell Publishing Limited, 1984.

Sets about the tasks of evaluating lists of national library functions and investigating the status of library services in Saudi Arabia, a developing country without a national library. An analysis of literature yielded a listing of 22 functions to be served by a national library. This listing was then ranked in terms of priority level by 41 national librarians throughout the world. Another questionnaire was sent to 40 Saudi professionals and potential users of a national library also asking them to give their priority ranking to the 22 functions. Data from the 41 national librarians were categorized into first, second, and third priority functions. Of the six first priority functions, acting as the legal deposit library and as the central collection of the nation's literature were ranked first and second, respectively. The responses from the Saudi individuals fell into 12 first priority, 7 second priority, and 3 third priority functions. The top two first priority functions were the same as those given by the national librarians but in reverse order.

Hoffman-Pfeffer, Carol. Information needs of rural populations: Implications for planning library/information services. *Library Review*, Summer 1987, *36*, 95-109.

Identifies information needs in a rural area in Israel in order to design a plan for library/information provision to meet the needs expressed. A multilevel sample survey was administered to the general adult population (n = 623); agencies and institutions, including industry and commerce (n = 20); libraries (n = 32); and users of the regional community college library (n = 34 students, 12 teachers). Each survey related to the particular group completing it. The survey was designed to elicit information needs and was not a statistical study. Information needs expressed were divided into general (leisure, life problems, hobbies) and professional (work/education related) categories. Many needs were expressed by the 721 people responding to the questionnaires.

Matheson, Ann. Scottish newspapers. *Library Review*, Autumn 1987, *36*, 179-185.

Discusses two challenges in Scotland in relation to nineteenth and twentieth century newspapers: preservation and collection-building. Newspapers before those times were printed on paper made of rags and stand up well. Although not complete, the National Library of Scotland has extensive files of the early scottish newspapers. After 1840 the scope and numbers of newspapers expanded, and they were printed on cheap paper. Because of limited space, the library adopted a conservative approach to keeping the newspaper output, limiting its intake to those begun in the eighteenth century and to one or two national newspapers. For historical reasons the most extensive collection of nineteenth and twentieth century Scottish newspapers is found in the British Library Newspaper Library at Colindale. Suggestions are given for the preservation of newspapers on file. The problems researchers have when early newspapers are needed are discussed.

CRAWFORD, JOHN C. Books, libraries and the decline of Gaelic on the Island of Arran. *Library Review*, Summer 1987, *36*, 83-94.

Surveys 250 years of book and library use on the Island of Arran. Book use there was at a high level over a long period of time. There was a link between Gaelic book use and religion and a tradition of bilingual book use developed in the late eighteenth century. Lack of Gaelic books and Gaelic reading led to English reading. Earlier Gaelic was the language of everyday life. Literacy was at a much higher level in the Lowlands. Reading, in either Gaelic or English, was not common in the Highlands until the nineteenth century. Gaelic declined later in the nineteenth century. By 1964 Arran's nine centers had available 3,110 volumes, an inadequate supply. After a vigorous campaign, mobile library service was offered in 1968; a year later 6,000 books were being issued per month.

HANSEN, KATHLEEN A.; WARD, JEAN; & MCLEOD, DOUGLAS M. Role of the newspaper library in the production of news. *Journalism Quarterly*, Winter 1987, *64*, 714-720.

Determines the major uses of a metropolitan daily news library. Survey instruments were developed from ideas expressed in group interviews with librarians, editors, reporters, and an editorial staff member. Questionnaires were completed by 136 newspaper staff members. As reported by news staff members, the clip files, reference books, and expertise of the library staff were the most commonly used services. Length of journalistic service did not predict use of materials, except for electronic base materials. Staff members have varied purposes in using the library, the most prominent uses being to check facts and past story treatments, for background research, and for resolution of discrepancy on background information. Journalists with 5 to 10 years experience made more use of the library than those with lesser or greater experience.

III-7 Literacy and illiteracy

GRAFF, HARVEY J. The history of literacy: Toward the third generation. *Interchange*, Summer 1986, *17*(2), 122-134.

Classifies the studies of the history of literacy into three generations. The first generation includes principally the late 1960s work of Stone, Cipolla, and Schofield who made several contributions, such as advancing a strong case for the historical study of literacy and reviewing the general course of literacy's chronological trends. The second generation grew directly from the approaches of the first. At this time there was greater concern for empirically and contextually grounded historical interpretations of changing literacy patterns (distributions and levels) and the relation between literacy trends and social and economic developments, institutional interventions, and state activities, among other topics. With this generation an increasing number of historians used quantitative methods and related literacy to economic change, demographic behavior, and the like. An agenda for the third generation was suggested. Seven possible avenues for literacy research were made. Past research in this area has emphasized the extent and distribution of reading and writing; issues about qualitative levels and actual uses of literacy skills have attracted less attention.

GRAFF, HARVEY J. *The Legacies of Literacy: Continuities and Contradictions in Western Culture and Society*. Bloomington, IN: Indiana University Press, 1987.

Traces the origins and development of Western literacy from its beginnings to the present and ponders upon the future of literacy. It was the Greeks who created the first full alphabetic system of writing, an achievement noted by some scholars as the last important step in the history of writing. The Greek alphabet reduced syllables to acoustic components, distinguishing vowels from consonants, thereby creating an efficient reading instrument. The transition to full popular literacy became possible with this alphabet. However, reading was at first considered a social and an oral activity and only slowly did a change to a silent tradition begin to occur. In the Middle Ages, levels of literacy fell from the achievements of Greece and Rome. At that period, too, literacy was equated with schooling in Latin rather than in the vernacular of the state or region. Several chapters are devoted to literacy in the Middle Ages. A third section of the book treats print in the old world and the new, extending to 1780. The last section of the book presents one chapter devoted to literacy in the 19th century and a chapter on literacy today and tomorrow.

Street, Brian V. *Literacy in Theory and Practice*. Cambridge: Cambridge University Press, 1984.

Begins with an analysis and critique of theories and models of literacy, particularly the ideological and the autonomous model. The conceptions of these models are examined and shortcomings discussed. The author supports an idelogical model and provides an analysis of the political and ideological context in which education provision and literacy programs are found in an area of Iran. Described in detail are the different literate practices in one village and the different perceptions and uses of literacies by different groups within the village. In a final section, literacy campaigns in various countries (UK, USA, Iran, Tanzania, UNESCO) are considered and their possible practical implications.

Arnove, Robert F., & Graff, Harvey J. Introduction. In Robert F. Arnove & Harvey J. Graff (Eds.) *National Literacy Campaigns: Historical and Comparative Perspectives*. New York: Plenum Press, 1987, 1-28.

Introduces the reader to the remaining essays on literacy in the book which these authors edited. They pointed out that literacy campaigns are not unique to this century but that they have taken place over the past 400 years from the time of the Protestant Reformation and that they share common elements. Historically, these efforts have been related to efforts of centralizing authorities to establish a moral or political consensus and to nation-state building. These campaigns have formed part of larger transformations in societies. Similarities between contemporary campaigns and those of the past are reviewed. Literacy is almost never an isolated goal but is related to group activities and progress. Past campaigns suggest that the creative use of symbols, a variety of media, the sponsorship of charismatic figures, and the availability of relevant and interesting materials all contribute to the diffusion of literacy. References are made to various literacy campaigns in different countries.

Stevens, Jr., Edward. The anatomy of mass literacy in nineteenth-century United States. In Robert F. Arnove & Harvey J. Graff (Eds.) *National Literacy Campaigns: Historical and Comparative Perspectives*. New York: Plenum Press, 1987, 99-122.

Discusses the status of literacy and factors related to literacy in the United States during the nineteenth century. Included in the report is information concerning schooling, especially elementary, rates of literacy/illiteracy among different groups; the relationship of literacy to occupation, wealth, race, ethnicity, nativity, gender, age, population density; book and periodical publication; religious teaching; technology and the mass market, including the religious press. By 1850 common-school reformers had successfully established the common school as the major institution for transmitting literacy. School attendance remained a problem. Generally the literacy campaigns of this period were successful as judged by the rising percentage of literacy rates, but there were problems. Literacy rates continued to reflect population density, economic development, and opportunity to attend school. By 1870 the problem of literacy had become a school problem, one of both quantity and quality.

Limage, Leslie J. Adult literacy policy in industrialized countries. In Robert F. Arnove, & Harvey J. Graff (Eds.) *National Literacy Campaigns: Historical and Comparative Perspectives*. New York: Plenum Press, 1987, 293-313.

Seeks the historic link between the role of formal schooling in Western Europe and the United States and the growth of literacy in these countries. Adult literacy efforts in the United Kingdom, France, and the United States were examined to distinguish their origins, types of provisions, and future prospects. Similarities and differences among the programs in these three countries were discussed. These countries were selected for their representativeness of a larger group of industrial countries that have similar patterns of provision and recognition. They were all interested in definitions and figures; they ask that the role of formal schooling be examined in a total attempt at eradicating adult illiteracy. In the United Kingdom and the United states the bulk of adult literacy instruction has been attached to traditional adult education. Despite all the provisions made for adult literacy training, the vast majority of illiterates have not been and will not be reached by methods now used.

Rachal, John R. Gideonites and Freedmen: Adult literacy education at Port Royal, 1862-1865. *Journal of Negro Education*, Fall 1986, *55*, 453-469.

Discusses the Port Royal experiment in adult literacy beginning in 1862, over a century before the Adult Education Act of 1964. A group of 53 men and women, derisively called Gideonites by the local soldiers, came from New York to "dispel ignorance and to bring civilization to the benighted former slaves." They were not completely prepared to be adult educators. Although the approaches varied, four patterns to the education of adult freedmen emerged. Thousands of adults received instruction in churches before Sunday morning services. The mixed class approach was primarily a day program for children, but adults also attended. In the tutorial approach, freedmen went to teachers' homes. The night school was the natural response to the adult freemen's deep interest in becoming literate. The idea of specifically designed materials for adults did not arise until after the Civil War. Problems arose, and the project at Port Royal was disbanded.

Arnove, Robert F., & Graff, Harvey J. National literacy campaigns: Historical and comparative lessons. *Phi Delta Kappan*, November 1987, *69*, 202-206.

Reports upon literacy campaigns that have taken place worldwide over the past 400 years and lessons learned from them. Since the Protestant Revolution of the 16th century in Europe, literacy campaigns have used a variety of media, involving a cosmology of symbols, martyrs, and heroes. Values leaders have articulated have been related to salvation, redemption, and recreation. Leaders have viewed literacy as a means to a more moral society and a more stable political order. Lessons learned from past campaigns include the need for literacy efforts to last long enough to be effective, the desirability of combining local initiative with national will, the need to recognize that certain populations will resist programs, the need to focus schooling on youth as a preventive measure, and the need to see literacy in its various contexts.

Engs, Robert F. Historical perspectives on the problem of black literacy. *Educational Horizons*, Fall 1987, *66*, 13-17.

Shows that the history of black literacy has been linked to the broader black desire for an education and the struggle to obtain it. Most blacks have valued education primarily as a means for individual liberation and growth. As early as the 1750s the free black communities in New York and Philadelphia organized formal schools. Slave owners distrusted literate bondsmen; consequently every southern state made it illegal to teach a slave to read or write. Slaves concluded that anything their masters forbade must have value. Whites in the North also maintained that education was an exclusive white privilege. In the years between 1861 and 1865 tens of thousands of slaves deserted their plantations, often opening schools once they found freedom. At the turn of the century black education was more accessible than in years past, but it was segregated and inferior. Desegregated America is not working as well as hoped. Reasons for this situation were hypothesized.

Gallegos, Bernardo, & Maggart, Zelda. History of literacy in New Mexico. Part III: 1845-1965. *The New Mexico Journal of Reading*, Spring 1987, 7(3), 9-15

Continues the history of literacy in New Mexico from the territorial days to the post-Sputnik era. During this period New Mexico became a state instead of a territory. As in the past, geography, politics, economics, and technology were factors in the development of literacy there. Children isolated by geography (rural and Indian children) had less access to reading and writing instruction than did the children in towns. Illiteracy among adults was more prevalent in isolated areas. New Mexico schools have been influenced by political events of different eras as well as economic conditions. During this period technology furthered the literacy effort, especially the printing press. Local printing made the production of materials in several languages a reality, thus encouraging many more people to read and write. Many of the factors related to literacy in the past are still a part of the pursuit of literacy today in New Mexico.

Gawthrop, Richard L. Literacy drives in preindustrial Germany. In Robert F. Arnove & Harvey J. Graff (Eds.) *National Literacy Campaigns: Historical and Comparative Perspectives*. New York: Plenum Press, 1987, 29-48.

Demonstrates the effects of literacy drives in Germany and their relation to the high rates of literacy achieved by the early nineteenth century. A series of literacy drives in the middle of the sixteenth century constituted perhaps the first state-led literacy campaigns of European history. The crucial impetus for literacy came from the Protestant Reformation. The literacy drives of the mid-to-late sixteenth century established the framework for primary schooling and were responsible for a growth in uniformity and size of the German school systems. The ability of the schools to teach literacy was impaired by a series of obstacles: low levels of attendance, resistance to schooling, inadequate teaching. The literacy drives of the eighteenth century surpassed and differed from the earlier ones. Officials demonstrated a systematic, persistent, and pragmatic approach to correcting weaknesses of school systems inherited from the sixteenth century. More pressure was placed upon parents to send children to schools which were more available than formerly. Improvements in teaching reading were noted. By the early nineteenth century the vast majority of peasants received the same basic education that the German elite did. By 1800 the German states had experienced unusual success in promoting literacy within a traditional social framework by means of literacy campaigns.

Gillette, Arthur. The experimental world literacy program: A unique international effort revisited. In Robert F. Arnove & Harvey J. Graff (Eds.) *National Literacy Campaigns: Historical and Comparative Perspectives*. New York: Plenum Press, 1987, 197-217.

Analyzes the Experimental World Literacy Program, created by UNESCO nearly 40 years ago with both a standard-setting responsibility and a technical-cooperation function concerning adult literacy. The report includes the strategy of the program, describes what it actually was, derives practical lessons from the experiment, examines results, and looks at international cooperation's role in literacy. Many countries were involved, but the focus was placed on 11 places. External assistance included experts, equipment, fellowships, and some cash transfer. The projects showed an overwhelming vocational orientation. Over one million people were initially enrolled, but there was a high attrition rate with only 25% or less passing the final exam. Discussed in the report are major criteria for a successful international literacy strategy (clarity, solidity, flexibility, adaptability) and major "nuts and bolts" (staff, teaching methods, institutional arrangements, language, premises, postliteracy follow-up). No breakthrough was evident concerning certain institutional problems and professional vs. amateur/volunteer staffs. New issues were pointed out, as the problem of languages and the importance of postliteracy follow-up. The program did not lead to mass literacy in participing countries, except Tanzania. Whatever faults may have marred the program, it made 100,000 people literate at a unit cost of about $300 and gave pointers on design and methods of literacy training.

BENNETT, J.A.H., & BERRY, J.W. The future of Cree syllabic literacy in Northern Canada. In Daniel A. Wagner (Ed.) *The Future of Literacy in a Changing World*. Elmsford, NY: Pergamon Press, 1987, 233-249.

Overviews the changing fortunes of the Cree syllabic script in Northern Ontario and notes how the changes are reflected in the numbers of people who become literate in the script. The study used four communities in Northern Ontario and included observation, surveys, and individual testing. The use of the Cree syllabic script, composed in the 1830s by a missionary, spread rapidly by means of person-to-person instruction. The script relies on 10 to 13 characters, each associated with the sound of a single consonant. Each character can be rotated into one of four orientations, and the orientation gives the vowel quality of the syllable. A survey of over 440 individuals over the age of 16 indicated that literacy in syllabics was almost universal in those over age 40, who, in turn, have little familiarity with English literacy. Literacy in English is almost universal among individuals under age 35; those between the ages of 25 and 40 often were in schools where no syllabics were taught. Originally, the syllabic script was the only means of direct long-distance communication, but now technologically augmented verbal communication has largely replaced the need for using syllabic script. Although it is still the major script employed by churches, its future in this use is questionable. As the population has aged, there have tended to be fewer and fewer individuals who have seen the Cree syllabic script as their primary tool of communication. The fate of the script appears to rest upon its importance as a cultural element which the native people may wish to preserve.

JOHANSSON, EGIL. Literacy campaigns in Sweden. In Robert F. Arnove & Harvey J. Graff (Eds.) *National Literacy Campaigns: Historical and Comparative Perspectives*. New York: Plenum Press, 1987, 65-98.

Describes two separate campaigns which comprise the history of Swedish literacy. The early church campaign around 1700 included informal instruction for everyone to read, sing, and pray the holy word of God. The school campaign around and after 1850 was based upon compulsory formal schooling so that everyone might read, write, and "reckon the world" from books. Sources of information about the early campaign were psalters, the ABC book, the catechism, early edicts, and church examination registers, the latter including records of progress in reading and catechism knowledge for people in the dioceses and deaneries. Examination of rural parish registers confirm the efforts of the clerical authorities for widespread popular education from the end of the seventeenth century. The oldest examination registers date from 1656-1669. From the information given it was possible to obtain a picture of literacy for many families in each place. In the school campaign, writing was added. Records that were consulted include literacy records of convicts and recruits and the 1930 census.

HOUSTON, RAB. The literacy campaign in Scotland, 1560-1803. In Robert F. Arnove & Harvey J. Graff (Eds.) *National Literacy Campaigns: Historical and Comparative Perspectives*. New York: Plenum Press, 1987, 49-64.

Considers the literacy program initiated in Scotland at the time of the Reformation and carried through by legislation in the seventeenth century to be the first truly national literacy campaign. It was designed to create a unified national religious, moral, and political community. Four acts by the Scottish Parliament in the seventeenth century and one in the early nineteenth century provided for schools (where convenient), teachers' salaries, and school costs. With religious and moral emphasis, the core of the literacy campaign was the parochial school system plus home learning and private schools. Improvements in literacy did not occur in a steady manner. Changing literacy levels depended upon people's occupations, their environment and socioeconomic status. Women and Highland inhabitants were less literate and had fewer opportunities than men and Lowlanders. Whatever its achievements, the national campaign was unable to remove inequalities among individuals based on class, gender, and geography.

Eklof, Ben. Russian literacy campaigns, 1861-1939. In Robert F. Arnove & Harvey J. Graff (Eds.) *National Literacy Campaigns: Historical and Comparative Perspectives*. New York: Plenum Press, 1987, 123-145.

Traces the development of Russian national literacy. The movement began with the emancipation of serfs in 1861 in the period of Great Reforms. At this time literacy was rare even among nobility. Basic education was stimulated by military reforms following the Emancipation. The central government supervised education through school boards and a standardized curriculum. The first Russian literacy campaign resulted in an increase in primary schools and pupils. Each of the following periods was described in detail with the focus being on village life and culture, because rural life dominated Russian culture well into the 1920s. In the 1930s the main goal of the literacy drive was economic rather than cultural. The Stalinist literacy drive came at a time of social and political tensions and included some coercion. Although there was turmoil, there was a spectacular increase in both primary school and adult literacy enrollments during the first two five-year plans (1929-1938), but the quality of the education provided was questionable. Since the death of Stalin many improvements in the education system were noted.

Bhola, H.S. Adult literacy for development in India. In Robert F. Arnove & Harvey J. Graff (Eds.) *National Literacy Campaigns: Historical and Comparative Perspectives*. New York: Plenum Press, 1987, 245-267.

Relates attempts to achieve adult literacy in India and political changes there. From 1917 onwards, adult education, including literacy, was correlated with India's struggle for independence. Literacy campaigns began in 1920 and were renewed in various forms since then. Report on Postwar Educational Development outlined a plan to make all adults literate within 25 years, but the policies, though insightful, were not always translated into action. In post-independence India, adult literacy was separated from adult education for reasons never stated. In 1977, the National Adult Education Program (NAEP) outlined plans to give the poor and disadvantaged, especially women, scheduled castes, and secluded tribes, literacy. Plans were made for mobilization of the masses and the state, administrative structures, instructional procedures, curricular goals, training of volunteer teachers, instructional materials, and evaluation of the program. When Mrs. Gandhi returned to power, she felt the NAEP needed to be changed. No nationwide evaluation has been made of the program, but various small-scale ones have been made.

Desai, Uday. Colonial legacy, illiteracy and education in India. *Education and Society*, 1986, *3*(2) & *4*(1), 52-61.

Considers the persistence of extensive illiteracy one of three fundamental characteristics of the education system in India. (The other two are phenomenal expansion and imbalance in growth.) Illiteracy is still more characteristic of India than literacy. Wide differences are found in literacy rates between urban and rural areas, males and females, and between states. Responsible for the extent of illiteracy are high incidence of dropouts from primary school and neglect of adult education. For every three children who go to school there is one who never attends. One-half of those who start to school never become literate. These include the most disadvantaged, the scheduled castes and tribes, as well as the rural, poor, and female children in the most backward states. No fundamental changes have been made in the educational system since India's independence from Great Britain.

BHARGAVA, P.K. Determinants of rural/urban disparities in the literacy rate in India: A path analysis approach. *Indian Educational Review*, April 1985, *20*(2), 9-20.

Uses path analysis to study interstate sex-wise disparities in rural/urban literacy rates in India and to determine the effect of various geographical, socioeconomic, and demographic variables causing these disparities. For purposes of analysis, an index of rural/urban disparities was constructed which became the dependent variable. The findings of the analysis showed that the independent variables selected explain about 92% of the variability of rural/urban disparities in the literacy rate from one state to another. Urbanization, per capita income, the percentage of nonagricultural workers to total workers, expenditure on education per capita play a dominant role in determining the rural/urban disparities; the large size of the population and geographical area were not significant.

CHAUHAN, V.L. Attitudes of tribal and non-tribal farmers towards adult literacy and improved agricultural practices in relation to their knowledge of new maize technology. *Indian Educational Review*, April 1987, *22*(2), 19-31.

Studies the attitudes of farmers in India toward adult literacy and improved agricultural practices. Independent variables were tribe (tribals, nontribals), adoption of new maize technology (adopters, nonadopters), and size of land holdings (small and marginal farmers). Dependent variables were attitudes towards adult literacy and towards improved agricultural practices and knowledge of new maize technology. In each of the eight groups there were 25 subjects who were administered individually a test of knowledge of maize technology and two attitude scales. Analysis of variance and product moment correlation tests were performed. The results showed significant differences in all tests favoring the nontribals, adopters, and small farmers over the tribals, nonadopters, and marginal farmers.

HAYFORD, CHARLES W. Literacy movements in modern China. In Robert F. Arnove & Harvey J. Graff (Eds.) *National Literacy Campaigns: Historical and Comparative Perspectives*. New York: Plenum Press, 1987, 147-171.

Reviews China's experience with promoting literacy, especially in the twentieth century. The complexity of the Chinese writing system was explored. It was estimated that 40,000 characters make up the written language, 7,000 being commonly used today. Three strategies have been used this century to improve literacy: to reform the language, reform the orthography, or both; to reform and expand the formal school system; to create new techniques for nonschool education for both children and adults to supplement the inadequate formal system. Numerous campaigns were conducted in various Chinese provinces at different times. The most striking fact about the literacy experience in China is the continued commitment to the spread of literacy and popular education. The main conclusion is that China has been successful in making good progress, but that much remains to be done. Progress has come primarily from the steady expansion of the school system, supplemented by adult or social education. The spread of the formal school system appears to be more effective than any of the proposed or partially implemented reforms in the writing system.

LIMTRAKARN, SIRIPORN. Literacy for rural development in Thailand. *International Research in Reading*, Winter 1987, *4*(1), 26-27.

Evaluates 860 subjects who were graduates of a literacy program at the termination of the program and one year later. Subjects were semi-skilled or unskilled, ages 14 to 50. A questionnaire concerned with demands of society for reading and writing, structured interviews for the evaluation of the program and teaching methodology, and two tests of reading and writing. At the end of the instructional program, which was not described, subjects read and wrote as well as elementary pupils from regular school programs, but their reading achievement was lower a year later. For minimal reading competency it was decided that people should be able to read a basic word list and the first page of the newspaper, bulletin boards, and official forms. They should be able to write the basic word list, their names and addresses, and fill out office forms.

KUO, EDDIE C.Y. Literacy in Singapore, 1970-1980. *RELC Journal*, June 1983, *14*(1), 1-17.

Compares Singapore literacy statistics from the 1970 and 1980 census reports. The definition of literacy for both years was the ability to read with understanding a newspaper in any language. The four official languages of Singapore are English, Chinese, Malay, and Tamil. The general literacy increased from 722 per 1,000 population in 1970 to 840 in 1980. There was a distinct trend toward equality among various ethnic groups and between males and females. The percentage of the population with bi-literate or multi-literate ability increased tremendously, testifying to the success of the bilingual eduction program. English and Chinese made parallel growth in literacy. Chinese in 1970 and in 1980 was the language with the largest number of literates in the population. English is known by large numbers of people from all ethnic groups. Malay and Tamil did not make much gain in literacy population-wise, but they made some gain within the Malay and Indian communities.

TOPPING, DONALD M. Literacy in the Pacific Islands. *Interchange*, Spring/Summer 1987, *18*(1-2), 48-59.

Examines the history of the use of European languages in the Pacific Islands, the development of literacy, and some of the probable impacts on these traditional societies as they are drawn into Westernization. The first sustained language contact between Europeans and Pacific Islanders came through the first white men to reside in the Islands, the beachcombers. Alphabetic literacy and Christianity were introduced to the Pacific Islands by Protestant missionaries in the early nineteenth century and furthered through mission schools and churches. Later colonial governments introduced literacy as the basis for secular authority with written laws, treaties, land deeds, and other official documents. The postcolonial governments demand literacy in European languages through the institutions of education, government, law, and economics. Traditional languages and cultures are being eroded because of the shift from oral to literate societies.

MANGUBHAI, FRANCIS. Literacy in Fiji: Its origins and its development. *Interchange*, Spring/Summer 1987, *18*(1-2), 124-135.

Traces the development of literacy in Fiji from the early part of the nineteenth century and describes a project in which high interest fiction and nonfiction books were placed into classrooms in 12 predominantly rural schools. Christianity and Islam introduced literacy in Fiji. The development of literacy there was affected by policies of colonial government, the rise of bureaucracy, the development of a workforce and the universalization of education. Literacy has remained largely a utilitarian tool. In Book Flood Project 600 students were subjects, divided into Shared Book Group (teachers and pupils reading and talking about specific books), Silent Reading Group (sustained silent reading), and Control Group (normal ESL course). Significant differences were found in reading and listening comprehension eight months later between the experimental and control groups. The project was continued the second year. No differences were found between the two experimental groups except in the first year at the grade 5 level favoring the shared book experience.

UNSICKER, JEFF. Tanzania's literacy campaign in historical-structural perspective. In Robert F. Arnove & Harvey J. Graff (Eds.) *National Literacy Campaigns: Historical and Comparative Perspectives*. New York: Plenum Press, 1987, 219-244.

Describes and traces the history of Tanzania's 15-year literacy campaign. The important events in four historical periods are described and help explain features of the ensuing literacy campaign: colonialism (1890-1960), nationalism and modernization (1961-1966), voluntary socialism (1967-early 1970s), frontal attack socialism (1970-1979). The governmental leaders and adult educators mobilized and sustained a literacy campaign which resulted in the country having one of the highest literacy rates in Africa. In 1970 the president directed that within one year illiteracy should be eradicated, but this did not occur because of lack of financial resources and educated manpower. In four years over 5 million people were enrolled in the campaign. Although tremendous progress had been made, the country's goals had not been met. The campaign continues today. Illiteracy has been reduced to 15%. Beyond enrollment statistics and examination results, little is known about the impact of the campaign on either the new literates or on the process of national development.

LEINER, MARVIN. The 1961 national Cuban literacy campaign. In Robert F. Arnove & Harvey J. Graff (Eds.) *National Literacy Campaigns: Historical and Comparative Perspectives*. New York: Plenum Press, 1987, 173-196.

Traces the development of education and literacy in Cuba since the Revolution in 1959. At that time only 50% of the children were in school, and 23.6% of the adults were illiterate. Tremendous strides have been made in education: more schools, more teachers, higher investment. The National Literacy Campaign laid the groundwork and inspired the people to achieve seemingly impossible literacy goals. The campaign utilized the services of 250,000 literacy workers, including 100,000 young people. These students went to different parts of Cuba, especially to heavily illiterate rural areas, to identify and teach illiterates. At the end of the campaign the illiteracy rate was 3.9%. The concept of mobilizing an entire nation to reduce illiteracy extended to all levels and promoted a national political will of lifelong education. The report discusses extensively the fourfold strategy: identifying the illiterate population, recruiting the literacy workers, training them, and organizing and implementing the campaign. The Battle of the Sixth Grade was an extension of the campaign and was undertaken to help all workers achieve a minimum reading grade level of sixth grade.

ARNOVE, ROBERT F. The 1980 Nicaraguan National Literacy Crusade. In Robert F. Arnove & Harvey J. Graff (Eds.) *National Literacy Campaigns: Historical and Comparative Perspectives*. New York: Plenum Press, 1987, 269-292.

Describes the scope, organization, and content of the Nicaraguan National Literacy Crusade of 1980 and its aftermath. Attention was given to the aspects of the campaign that related to integrating previously excluded groups, stimulating and consolidating national unity, strengthening mass organization, and encouraging widespread participation. An all-out attack was made on illiteracy. Over 250,000 youths and adults volunteered to teach illiterates in the city and in rural areas. Learning was centered on the basic reader, *Sunrise of the People*. Many principles of Paulo Freire were used. A follow-up campaign centered upon teaching literacy in Spanish or in one of the indigenous languages (Miskito, English, Sumo) on the Atlantic coast. Between March 23 and August 23, 1980, a total of 406,056 Nicaraguans had learned to read and write Spanish in the National Literacy Crusade and 12,664 in the other language campaign on the coast. Outcomes besides a literate nation were many, such as raising the consciousness and commitment of youth, integration of rural population into national life, improvement of the status of women, integration of the Atlantic coastal areas with the remainder of Nicaragua.

JONES, SIDNEY. Arabic instruction and literacy in Javanese Muslim schools. *International Journal of Sociology of Language*, 1983, *42*, 83-94.

Shows the complexity of the relation between literacy and Arabic in Muslim schools in Java. The function of Arabic literacy is discussed in relation to three groups: ordinary villagers, sons of the Muslim middle class, and aspiring religious scholars. The purpose of instruction for the first group was to read the Qur'an, their religious source. Children attended classes to become better Muslims, not to become literate in Arabic. The second group attended classes for discipline, character building, and advanced religious training. They might acquire a minimal reading knowledge of classical Arabic; this study led to fluency in writing Javanese in Arabic letters. Of the three groups literacy was probably most characteristic of this group. In the third group scant attention was given to a student's proficiency in language. Knowledge was measured by the number of texts studied. Literacy has never been the aim of Arabic instruction.

MESSICK, BRINKLEY. Legal documents and the concept of 'restricted literacy' in a traditional society. *International Journal of Sociology of Language*, 1983, *42*, 41-52.

Applies Goody's theory of restricted literacy to Ibb, capital of Yeman. Restricted literacy was used in reference to alphabet-using literate cultures in which literacy is restricted by factors other than the technique of writing. The focus of the study was on a specialized genre of secular literacy, the use of written legal documents connected with the holding and transfer of property. Traditional literacy in Ibb was related to the old system of social stratification. Specialists in legal documents were powerful people and crucial to the conducting of private business. When the concept of restricted literacy was applied to Ibb, reservations were expressed about its theoretical implications. Goody reversed the order of case study and theory, placing theory first. His theory is culture-specific and is not independent of a particular context.

BOWREN, FAY F. Adult reading needs adult research models. *Journal of Reading*, December 1987, *31*, 208-212.

Points out deficiencies in adult literacy research and issues needing answers. Research is lacking because adults are not geographically stable and because of the use of cross-sectional instead of longitudinal models which results in a comparison of vastly different age groups. Because traditionally adult basic education programs operate on theories of how children learn, questions arise about their suitability for adults. Issues needing answers include definitions of literacy, adult's acquisition of initial reading skills, classroom instructional patterns, evaluation procedures, adult learning disabilities, retention of learners, programs for teachers of adults. The need for research in these areas is great.

CHALL, JEANNE S. Reading development in adults. *Annals of Dyslexia*, 1987, *37*, 240-251.

Compares the development of reading ability of adults and children, from the lowest to the most advanced levels of literacy. Included are suggested kinds of instruction for adult reading improvement and difficulties they experience at each level. It is pointed out that little attention has been paid to adults with reading disability, especially those who have had a severe problem in elementary and high schools. Higher levels of literacy are advocated because they are presently needed and will be needed in the future. An historical overview of changes in literacy standards and needs in the United States is included.

SMITH, DAVID M. Illiteracy as social fault: Some principles of research and some results. In David Bloome (Ed.) *Literacy and Schooling*. Norwood, NJ: Ablex Publishing Corporation, 1987, 55-64.

Lists and discusses principles for conducting research into literacy. Cites procedures and results of an unpublished Master's thesis as well as other published and unpublished results in illustrating the principles and discussing insights gained from the research. It is noted, for example, that literacy and illiteracy take on different meanings for males and for females, at least in part because of the different personal and public roles played by the two sexes. Also while sex differences result in different motivations for becoming certified literate, the real motivation does not appear to be one of empowering.

NATIONAL ADVISORY COUNCIL ON ADULT EDUCATION. *Illiteracy in America*. Washington, DC: U.S. Government Printing Office, 1986.

Reports conditions concerning illiteracy in the United States as viewed by the National Advisory council on Adult Education. The extent of the problem is discussed from the point of view of conflicting definitions of illiteracy, the economy, and the impact of the military, refugees, and immigrants. Three shifts are considered responsible for the problem: a philosophical shift (traditional to progressive), societal shift (traditional to permissive), and governmental shift (local to state and federal; lay to professional). The result of these shifts is a loss of authority. All three shifts are applied to public education. General solutions are suggested. Selected research is reviewed in this report, but no new research findings are included.

HARMON, DAVID. *Illiteracy: A National Dilemma*. New York: Cambridge Book Company, 1987.

Attempts to view various aspects of the problem of illiteracy. It is argued that illiteracy is not confined to those who cannot read but exists wherever individuals have reading and writing skills that are inadequate for the situation in which they find themselves. Thus literacy is a variable and relative set of abilities rather than a fixed set of skills. Pointed out are the conflicting statements on the extent of illiteracy existing in the U.S.A. today. The research is regarded as limited in amount and/or affording little in the way of guidance. Literacy is regarded as a value rather than a skill. The causes of illiteracy are conceived of as part of a complex problem that may take years to achieve an understanding of.

DIEKHOFF, GEORGE M. An appraisal of adult literacy programs: Reading between the lines. *Journal of Reading*, April 1988, *31*, 624-630.

Reviews evaluation methods and results in research concerned with adult literacy training programs. In most programs statistically significant gains are found when gains are one or two reading grade levels. In these cases investigators failed to distinguish between statistical and practical significance of reading gains. Only a few participants made substantial gains. Investigators often make exaggerated claims for the effectiveness of literacy training on the basis of criterion measures not directly related to reading improvement, such as program need, usage and growth of staff and equipment, anecdotal case reports, student and tutor self-reports. It was concluded that adult literacy training programs have failed to produce life-changing improvements in reading ability that are often suggested by published evaluations of these programs.

GRAFF, HARVEY J. *The Labyrinths of Literacy: Reflections on Literacy Past and Present*. Philadelphia: Falmer Press, 1987.

Brings together a series of essays examining the social and economic contexts into which literacy came. The notion that industrialization depended upon widespread literacy is challenged, and it is contended that the change to a factory system relied little on literacy. In the opening chapter, the history of literacy is treated. It is stressed that the history demonstrated that there is no one route to universal literacy and no one path destined to succeed in the achievement of mass literacy. Most historical studies have concentrated on measurement of the extent and distribution of reading and writing. Information on the abilities to use those skills is sparse, and the research findings indicate that qualitative abilities cannot be deduced directly from quantitative levels of literacy's diffusion. Thus, one argument presented in the book is that the measurement of the distribution of literacy in a given population may tell us little about the uses to which literacy skills could be put and the degree to which the different demands on personal literacy could be satisfied with the skills held. It is also noted that with increasing rates of literacy may not have come a rise in capabilities or qualitative abilities. There is a possibility that mass levels of abilities to use literacy may have lagged behind the actual increases in literacy rates.

Bhola, H.S. Destined for literacy. *Educational Horizons*, Fall 1987, *66*, 9-12.

Shows effects of illiteracy and ways literacy is a global problem. The connection between literacy levels and the Gross National Product was given for various countries. Illiteracy rates in relation to infant mortality were shown for Mali, Tanzania, Nepal, Mexico, and the black population for the United States. The size and scope of the problem includes both Third World countries and industrialized ones. Estimates of the numbers of illiterates worldwide and in the United States, the work of the National Adult Literacy Initiative, and the connection between political culture and literacy strategy are included.

Mikulecky, Larry. The status of literacy in our society. In John E. Readence & R. Scott Baldwin (Eds.) *Research in Literacy: Merging Perspectives*. Thirty-sixth Yearbook of The National Reading Conference, 1987, 211-235.

Reviews and interprets research about literacy levels of adults and what is currently being done for adults experiencing literacy problems. Topics addressed in the review include the following: definitions of literacy, changes in literacy patterns and demands, adult basic education, time needed to make gains, effective literacy programs and the problems of transfer. It was concluded that there is more than one literacy problem in the United States. The problem receiving the most media attention, adults who can barely read or write, is the problem of a small percentage of adults. A larger problem relates to the many adults who can read and write but not well enough to meet literacy demands of modern living. There is a growing awareness that basic literacy training must be integrated with functional uses of literacy.

Bhola, H.S. The politics of adult literacy promotion: An international perspective. *Journal of Reading*, April 1988, *31*, 667-671.

Presents a political model of literacy promotion for the purpose of understanding the policies of adult literacy promotion in various societies in the world. Within the major model, three models were included: motivational-development, planned development, and structural-development. The first one emphasizes individual motivations. Literacy may be offered to illiterates, but they must be motivated to receive it. The planned development model recognizes the role of institution building in the development of society. Literacy is considered important and is typically under state control. The structual-development model is followed by what can be called revolutionary societies. The emphasis is on change and building new institutions. Mass campaigns for literacy promotions are a part of this model.

Balmuth, Miriam. Recruitment and retention in adult basic education: What does the research say? *Journal of Reading*, April 1988, *31*, 620-623.

Reviews research, based on reports of adult basic reading programs, concerning recruitment and retention of English-speaking adults, age 17 or older, who read below 5th grade reading level. Useful recruiting procedures included home visits by recruiters, a combination door-to-door canvassing and personalized TV spots, successful students in the programs, networking with various agencies. Useful only occasionally were radio messages and newspaper advertisements. Strategies for dealing with excessive absenteeism included comprehensive counseling techniques and extrinsic motivation. Approaches to reading or preventing dropouts include active follow-up, student conference, self-help support groups of students in the program, social activities, success in reaching their objectives.

Fuller, Bruce; Edwards, John H.Y.; & Gorman, Kathleen. Does rising literacy spark economic growth? Commercial expansion in Mexico. In Daniel A. Wagner (Ed.) *The Future of Literacy in a Changing World*. Elmsford, NY: Pergamon Press, 1987, 319-340.

Asks whether rising levels of literacy aided economic growth in Mexico during the period 1900 to 1940. Levels of literacy and school investment in Mexico varied greatly. As late as 1907, fewer than one-fifth of all school-aged children within rural states ever entered school. Education became a key ingredient in the many social reforms initiated following the 1911-1917 revolutionary period. Between 1921 and 1947, the number of rural schools rose from about 1,000 to 13,700. Literacy rates in urban areas rose from 26% in 1900 to 49% in 1940; in rural municipalities, the rise was from 14% in 1900 to 31% in 1940. Simple correlation coefficients between literacy rates and economic structure among Mexico's states were computed. For 1900, literacy within urban areas was positively correlated to aggregate economic output, value of livestock, and mining production. For 1940, all literacy rates were correlated with livestock value and with manufacturing output. A multivariate analysis for 1940 data indicated no relation between literacy and total output after controlling for capital investment, land under cultivation, and labor force size. However, for manufacturing output, the total literacy rate did hold an effect. Value of livestock was also found to be significantly related to total literacy but was negatively associated with rural literacy. It is felt that in general the findings offer support for the human capital model.

STEVENS, JR., EDWARD W. *Literacy, Law, and Social Order.* DeKalb, IL: Northern Illinois University Press, 1988.

Analyzes literacy from a numer of dimensions with particular focus on the legal, political, and economic meanings. The book begins with a chapter on theoretical and historical perspectives on implications. Illiteracy in the United States is traced from the colonial period through to the period following World War II. Definitions of literacy are discussed, and it is determined that being literate is a matter of both expectation and response. A second chapter examines and defines selected political and philosophic parameters of the relationships between literacy and justice. Chapter 3 views the political dimensions of illiteracy, examining the problem of illiteracy and the legal issues involving illiterates within the context of political theories. In Chapter 4, the author provides an overview of the economic dimensions of illiteracy with a specific focus on illiteracy and contract. Illiteracy and contract law are treated in greater detail in Chapter 5.

CARSETTI, JANET K. Literacy, the law, and the reluctant learner. In Richard W. Bailey & Robin Melanie Fosheim (Eds.) *Literacy for Life: The Demand for Reading and Writing*. New York: The Modern Language Association of America, 1983, 223-235.

Cites data from Project READ specific to reluctant readers and troubled youth. Notes that of the 10,000 young people tested by Project READ, over 99% had the ability to read better than test scores indicated. Reports that of the 3,663 young people pretested for the project, 1,997 remained in the program for the suggested 10-week period. Reading grade equivalents should have been at tenth grade level at pretesting, but the mean was at sixth grade level. A mean reading gain of four months was realized over the five months duration of the program. Schools were placed according to the standard deviation of reading gains into four groups. Groups were then compared as to their use of nonstop reading, functional reading packets, music activities, and creative writing activities. The amount of time spent in nonstop reading was related significantly to gains in reading comprehension scores.

ETS DEVELOPMENTS. National effort needed to raise the quality of literacy in America. Princeton, NJ: Educational Testing service, Vol.33, Summer 1987, 2.

Questions the quality of literacy in America. Based upon data from three National Assessment of Educational Progress surveys, it was concluded that students from fourth grade through young adults are unable to dissect ideas and defend their positions. Considered in this report were reading and writing skills of 100,000 fourth, eighth, and 11th grade children and of some 3,700 young adults aged 21-25. Aside from the superficial quality of American literacy, some of the principal findings are as follows: black and Hispanic children are well behind white children by grade 4 and never catch up. Reading performance improved for at-risk minority students from 1971 to 1984, but changes in writing achievement were less encouraging. Recommendations are given for the upgrading of literacy skills in America.

TUMAN, MYRON C. *A Preface to Literacy: An Inquiry into Pedagogy, Practice, and Progress.* Tuscaloosa, AL: University of Alabama Press, 1987.

Inquires into the meanings and definitions of literacy and traces the emergence of the idea of literacy as it grew over the past century. The future of literacy is also addressed. The notion that being literate involves the ability to comprehend and create texts is relatively new. Indeed, the first recorded use of the word "literacy" appeared in an American education journal only in 1883, although the words "literate," "illiterate," and "illiteracy" are centuries old. However, while there may be general support for literacy education today, what is meant by literacy or what we are supporting is not always clear. Contradictory motives appear to underlie our concern with literacy.

WALTERS, KEITH; DANIELL, BETH; & TRACHSEL, MARY. Formal and functional approaches to literacy. *Language Arts*, December 1987, *64*, 855-868.

Considers two approaches to literacy: formal and functional. Those who subscribe to the formal approach see literacy as the mastery of forms (forms of thinking and forms for translating those ways of thinking into writing). The functionalists consider how people became literate and how they use literacy in their daily lives. The formalist researchers subsume two approaches to literacy. The "Great Leap Theory" contends that the acquisition of literacy causes fundamental changes in human cognition and that the leap brings about alterations in the consciousness of individuals and in cultures. The second line of research attempts to define "essayist literacy," usually epitomized by the philosophical essay. Discussions of functional approaches to literacy date from the Second World War when there was concern about the inability of recruits to read or write sufficiently well. There have been criticisms of both approaches.

DE CASTELL, SUZANNE, & LUKE, ALLAN. Literacy instruction: Technology and technique. *American Journal of Education*, May 1987, *95*, 413-440.

Examines historical origins and current consequences of the development of a technology for literacy instruction and supports ideas with expert opinion and research. It was argued that reliance on technocratic skills-based approaches resulted in a gradual deskilling of teachers and the production in students of a literal, uncritical, and mechanical relation to reading, writing, and the interpretation of texts. With the limited range and scope of what is currently written and read by the majority, the writers contended that this lower-order literacy does not represent a crisis but is appropriate for the demands of contemporary labor and culture.

HUTSON, BARBARA A. Literacy at school and literacy at work. In David Bloome (Ed.) *Literacy and Schooling*. Norwood, NJ: Ablex Publishing Corporation, 1987, 225-227.

Reviews research and opinions on literacy as related to work situations. Included in the review are the different definitions of literacy, the need for advanced literacy, technical literacy, characteristics of readers at work, text characteristics, oral input in job settings, graphic information, interactions of text and task, task characteristics (purpose, conditions, cognitive demands), interaction of task and reader characteristics, social context. It was concluded from the research cited that a picture of literacy at work involves information to be selected and organized in terms of a problem formulated by the worker. Both school-based literacy and work place literacy have impliations for each other. Similarities and differences of the two are discussed.

BLAKE, MARY E., & SNYDER, JAMES F. Occupational literacy: Completing the communication cycle in the workplace. *New England Reading Association Journal*, Winter 1988, *24*(1), 14-18.

Reviews research and expert opinion concerning joint efforts of reading personnel and business and industry in furthering literacy among employees. Attention is given to time given to reading, reading comprehension as a prerequisite to writing, productive use of reading time, characteristics of occupational reading materials, and future occupational literacy.

FIELDS, ERNEST L. Industry-based programs: A growing source for adult literacy development. *Lifelong Learning*, September 1986, *10*(1), 7-9.

Analyzes four types of industry-based literacy programs and classified them according to levels of collectivity with which employees are targeted for participation and applicability to the company's needs. The types identified include the individual/indirect program offered to employees on an individual basis to meet literacy needs; group/indirect program for general basic individual needs; individual /direct program for skills needed to perform a job or to advance to or retain a higher position; group/direct program targeted to specific groups of employees to give prerequisites for technical courses required to inroduce new techniques. Data were obtained from a literature search, on site visits, and interviews with company officials in nine programs selected for the study. Three types of organizational settings of industry-based literacy programs are described and illustrated.

III-8 Social and cultural influences

LUKE, ALLAN. Linguistic stereotypes, the divergent speaker and the teaching of literacy. *Journal of Curriculum Studies*, October-December 1986, *18*, 397-408.

Reviews research and expert opinion concerning deficit and different language use and myths and stereotypes that result. Throughout the history of schooling there have been negative evaluations of children from lower socioeconomic or culturally different backgrounds. Literacy has historically been tied to social class. Many argue that initial encounters with reading materials are contingent on the child's ability to make the transition from the oral culture of the home and community to the literate culture of the school. Two general considerations emerged for educators. They should develop a sensitivity to the culturally communication patterns and styles of learning of children from culturally different backgrounds. They should become aware of children's divergent linguistic and social competencies and attempt to incorporate them in their teaching. Too many children of divergent backgrounds encounter highly unnatural and artificial curricula which cancel their language competence and understanding of the world.

REDER, STEPHEN M. Comparative aspects of functional literacy develoment: Three ethnic American communities. In Daniel A. Wagner (Ed.) *The Future of Literacy in a Changing World*. Elmsford, NY: Pergamon Press, 1987, 250-270.

Describes briefly an ongoing comparative study focusing on the relation between sociocultural context and adult literacy development. Three communities were involved: an Eskimo fishing village, a community of Laotian immigrants now on the West Coast, and a partially settled Hispanic community in the migrant stream in the Pacific Northwest. In all three communities, recent literacy development came about as a response to changing demands for the use of written materials in everyday life. Adults often acquired literacy skills in response to new perceived needs for literacy in their lives without participating in formal classes. Literacy practices often occurred in a social context of more than one person, described by the author as a collaborative setting. Collaborative literacy practices were engaged in in varied ways: technologically such as in reading or writing as part of performing the task, functionally such as providing specialized knowledge and expertise needed by the technologically engaged person, and socially when someone has knowledge of the nature of the practice and its implications for the life of a community.

Harris, Mary M., & Smith, Nancy J. Literacy assessment of Chapter 1 and Non-Chapter 1 homes. *Reading Improvement*, Summer 1987, *24*, 137-143.

Surveys parents of 1,091 kindergarten and first grade children attending 14 elementary schools in a midwestern city concerning home literacy experiences. In a single distribution, 58% of the surveys were returned. Half of the schools were comprised of Chapter 1 families who were compared with non-Chapter 1 families. The internal consistency of the instrument developed for this study was demonstrated. Items on child and family possession of reading materials, physical closeness while reading aloud, library use, opportunities for self-expression, parent modeling of reading, and parent valuing reading over television were significantly lower for Chapter 1 homes than for non-Chapter 1 homes.

Hayden, H.M. Ruth, & Fagan, William T. Fathers and mothers reading familiar and unfamiliar stories to their children. *Reading-Canada-Lecture*, Winter 1987, *5*, 231-238.

Investigates the significance of the familiarity and unfamiliarity of the story to children and which parent reads to them in a story reading situation. The sample for the study consisted of 27 kindergarten children, 20 fathers, and 20 mothers from both urban and rural communities. Each parent read two stories to the child: a familiar story chosen by the child and an unfamiliar one chosen by the researchers. Tape recordings were made and transcribed. Two major categories (requests and responses) of interaction strategies were devised. MANOVA and Raos approximate t-tests using Wilks Lambda analysis were used to analyze the data. The nature of the interaction did not differ with respect to the gender of the parent, but there were differences in the kinds of interaction strategies which occurred in familiar versus unfamiliar texts. The familiar text allowed the child to focus on the text at both the meaning and graphemic levels and to have a sense of what it feels like to be a reader. The unfamiliar story appeared to expand the child's notion of a story and his knowledge schemas regarding events of the world.

Shoemaker, Pamela J.; Reese, Stephen D.; Danielson, Wayne; & Hsu, Kenneth. Ethnic concentration as predictor of media use. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 593-597.

Investigates the relation between the concentration of Hispanics in a community with various communication indicators of acculturation. Data were collected from telephone interviews and the census, the latter to estimate the percentage of Hispanics in the communities. The concentration of Hispanics was positively related with their likelihood of speaking Spanish with relatives and friends, with their Spanish-print media reading and radio listening, and with Anglos' reported importance of having a Spanish-language daily newspaper to read.

III-9 Reading in nonschool settings

Chatman, Elfreda A. The information world of low-skilled workers. *Library and Information Science Research*, October-December 1987, *9*, 265-283.

Examines information needs and seeking behavior of janitorial workers at a large university. Although a number of needs, such as health and career opportunities, were identified, their work environment had few sources of information for their use. Subjects were not library users. They showed limited reading skills and indifference to reading except for newspapers and the Bible.

Keller-Cohen, Deborah. Literate practices in a modern credit union. *Language in Society*, March 1987, *16*, 7-23.

Focuses on how an institution uses written materials and how its clients respond to institutional writing. The data were drawn from observations and interviews in a midwestern credit union from late 1980 to early 1982. The ways in which the credit union used writing with its customers and the behavior of credit union members were examined. The practices were grouped and discussed according to document availability, structure of the interactions in which documents are used, attitudes and beliefs about the documents, client practices as observed in the behavior of credit union members, and functions of documents. Some of the practices seemed to restrict opportunities for credit union members to read financial documents, both individually and in combination.

III-10 History of reading/spelling

Radencich, Marguerite C. An historical overview: The influence of early textbooks on the teaching of reading and spelling. *Spelling Progress Quarterly*, Winter 1988, *4*(1), 9-15.

Examines the historical roots of the division between reading and spelling instruction in the United States. Early reading was taught through a spelling or alphabetic method. After the middle of the eighteenth century spelling began to assume the role of an independent subject, the movement being stimulated by Noah Webster's blue back speller in 1783. His books were in widespread use from the late eighteenth to the late nineteenth century. The influence of others is delineated, as Comly, Alcott, McGuffey, Mann, Worcester, Pierpont, Cobb. After 1840 reading books were produced almost entirely in graded series; nearly all the compilers provided a spelling text to go along with their reader series. Spellers broke away from the reader series and regained their status as separate texts around the turn of the century.

Luke, Allan. Making Dick and Jane: Historical genesis of the modern basal reader. *Teachers College Record*, Fall 1987, *89*, 91-116.

Traces the development of the Dick and Jane texts and examines dominant intellectual and economic considerations of their authors and publishers; large-scale curriculum development and economic interests provided a frame for the analysis of text authorship and production. The development of books, including basal readers, is dictated by editorial behavior which reflects market and economic interests, cultural values, perceptions of market needs, dominant trends in educational research, and regional educational policy. A detailed history of the conceptualization, authorship, and production of the Scott, Foresman readers is given. Credit for their success was given to William S. Gray. A major development was the provision of books in different curricular fields. Other innovations followed. The Curriculum Foundation Series led to different readers published by other companies which varied in form but retained many of the structural characteristics of Gray's readers. Gray's concern with research and the teaching of reading was constant. He dominated reading research from his initial experiments published in 1910 until his death in 1960. It was concluded that Gray and Arbuthnot's texts dominated the market for over three decades and were the new McGuffey.

Mulcahy, Patricia, & Samuels, S. Jay. Three hundred years of illustrations in American textbooks. In H.A. Houghton & D.M. Willows (Eds.) *The Psychology of Illustration: Instructional Issues*, Vol.2. New York: Springer-Verlag, 1987, 1-52.

Traces the history of illustrations in textbooks as they reflected changes in American culture, history, nationalistic goals, and educational methods. These illustrations describe changes in attitudes about children and reveal how children learned abstract principles and ideas through books intended to teach, entertain, and entice young readers to the printed page. The history of illustrations was treated chronologically, beginning with pre-eighteenth century materials and continuing to the present day. If illustrations appeared in pre-eighteenth century books, the most common type was a large, intricately carved woodcut. Although there were few illustrations in American schoolbooks before the nineteenth century, *The New England Primer* showed how illustrations could help children get the main points of a passage. Illustrations in early nineteenth century revealed society's emergent concept of childhood. At this time the illustrations became larger, clearer, more plentiful, and more directly related to the text. During the latter part of the nineteenth century pictures became artistically clearer, more aesthetically pleasing, and pedagogically more significant as comprehension aids. Content area book publishers used line drawings, maps, and graphic symbols to clarify abstractions. Color did not appear in textbooks until the latter part of the nineteenth century. The 1960s constituted the turning point for the representation of women and minorities and different ethnic groups in textbook illustrations.

Wagner, Daniel A., & Lotfi, Abdelhamid. Learning to read by 'rote'. *International Journal of Sociology of Language*, 1983, *42*, 111-121.

Focuses on Islamic education, including reading instruction, in Yemen Arab Republic and Senegal. Four themes are addressed: Quranic schooling, socio-political role of the teacher, rote learning and traditional vs. modern pedagogy, and prognosis of Islamic education. Schools in both cities place emphasis on oral mastery of essential teachings and ritual, self-posed learning, and learning of literary skills to supplement oral mastery. The traditional Quranic schools are designed to maintain Islam in society. Rote learning (much repetition, lack of understanding) continues to be very much a part of the curriculum and probably will remain so. Quranic schooling has varied little over time and across societies. A modernization process is seen due to younger, better trained instructors, influx of Arabic texts, and an increasing sense of Islamic brotherhood among nations.

III-11 Newspaper publication

Lacy, Stephen. Competing in the suburbs: A research review of intercity newspaper competition. *Newspaper Research Journal*, Winter 1988, *9*(2), 69-76.

Reviews 20 years of research about intercity newspaper competition to offer generalizations about the structure environment and its effects on the industry and readers. The term *umbrella competition* was first used in 1975 to explain that each layer of newspaper competition (metropolitan dailies, satellite city dailies, suburban dailies, twice-weekly suburban and shopper newspapers) acts like an umbrella. Other layers were added later to the structure. The key to understanding intercity competition is content competition, including advertising, news, and editorial content. Readership results from this competition and is the basis for advertising competition. The variability of content competition appears to be much greater than that of circulation and advertising.

Blankenburg, William B. Predicting newspaper circulation after consolidation. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 585-587.

Explores the question of whether the survival rate of circulation after consolidation can be predicted from public data. The 38 newspaper publishing firms issuing two separately titled dailies for at least five years were investigated. The dependent variable was the percentage of total circulation that survived two years after consolidation. Five predictor variables included a general index of past circulation performance, an index of duplicated circulation, market size, market growth, and market wealth. Multiple regression was used to analyze the data. The publisher of a two-newspaper combination can expect to retain about 93% of circulation after consolidation. Before and after circulations correlated with each other and with the number of households in the county. Market size was a strong correlate.

Wolf, Rita; Thomason, Tommy; & LaRocque, Paul. The right to know vs. the right of privacy: Newspaper identification of crime victims. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 503-507.

Surveys 205 newspaper editors or managing editors who were questioned in a 1983 study concerning privacy rights of victims in crime reporting. The return rate was 54.6%. The study found a continuation of the trend toward less specific identification of crime victims. Newspapers are evaluating their identifications on a case-by-case basis and are offering more protection for private citizen victims. Editors were willing to refrain from using names if the victims had made such a request. They overwhelmingly agreed that increased attention to the privacy rights of victims is a good thing. Editors who think the trend toward less identification is a threat to the public's right to know are more likely to identify crime victims by name and address.

Husni, Samir A., & Lee, Peter R. What metropolitan dailies foreign desk editors think about news on South Africa. *Newspaper Research Journal*, Fall 1987, *9*(1), 83-89.

Surveys 64 foreign desk editors of U.S. metropolitan dailies with 16 closed-end statements concerning news of South Africa and its effects. The majority of editors questioned believed that American metropolitan readers were interested in reading about South Africa, more so than reading about other African nations. The majority of editors believed that readers have been influenced by reading South African news as have American foreign policy makers been. News stories rather than editorials have influenced public opinion. The news of this area was considered adequate and not over-reported but lacking analysis. The South African government's censorship has affected the news being reported.

Reagan, Joey, & Collins, Janay. Sources for health care information in two small communities. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 560-563, 676.

Inquires of 219 subjects in telephone interviews where they receive information about medical care and hospitals. They were also asked if they had seen hospital advertisements. Data were analyzed by Cochran Q, a test for dependent measures. Sources by rank for hospital information were the physician, friends/neighbors, newspapers; for medical care sources were physician, friends/neighbors, employer, relatives, flyers/newsletters, medical association, newspaper, and yellow pages. Almost a third (30.6%) had seen hospital advertisements. An examination was made of the previous year's coverage of health care in the local daily newspapers. It was concluded that either there is insufficient information in the newspapers or the right kind of information is not being provided.

So, Clement Y.K. The summit as war: How journalists use metaphors. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 623-626.

Investigates the use of metaphors in the New York *Times*, *Time*, and *Newsweek* in the reporting of the 1985 U.S.-Soviet summit talk held in Geneva. Relevant materials found in the two issues of the magazines prior to and after the talks and in the *Times* one week before and one week after the talks were read to locate metaphors used to describe the summit. The two magazines covered very similar topics while the*Times* went into more detail. Among the metaphors used, most belonged to three domains: war, business, sports. Editorials were the kind of writing most filled with metaphors, followed by feature stories, commentary, news analysis, and letters to the editor. Straight news stories had a low proportion of metaphors.

Hynds, Ernest C. Large daily newspapers have improved coverage of religion. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 444-448.

Explores the newspapers' coverage of religion, the newspapers' perceptions of their readers, and trends in religion coverage. A 4-page questionnaire was mailed to religion editors of all newspapers with 100,000 or more circulation. Usable responses were received from 55 (47%) editors. Religion coverage in these papers appears to be growing and improving, but their allocations are less than those for business, sports, and lifestyle coverge. Most select and use religious news throughout the paper and also run periodically a page or section of religious news. Major issues in recent years include the mingling of religion and politics, ongoing changes in the Catholic church, social issues, the rise of fundamentalism, the rise of the religious right, church-state separation, and changing roles of women in religion.

Guenther, Lea. Four categories of change at the weekly newspaper. *Journalism Quarterly*, Winter 1987, *64*, 863-867.

Explores changes observed by publishers of weekly newspapers in a 7-county suburban and metropolitan area and determines if these changes are consistent with those observed by publishers in other parts of the country. The 81 publications in this study included 24 paid circulation newspapers, 44 free distribution papers, and 13 shoppers. Telephone interviews were conducted with 17 publishers and one editor who represented the 81 newspapers. Overall circulation increased due to population increases and the entry of free distribution newspapers. The publishers of 57 publications have observed an increase in competition, especially from free newspapers and shoppers. Ownership by an individual is almost nonexistent. All publications use some form of computerized equipment.

Lacy, Stephen, & Bernstein, James M. Daily newspaper content's relationship to publication cycle and circulation size. *Newspaper Research Journal*, Winter 1988, *9*(2), 49-57.

Compares newspapers published in the mornings (42), and afternoons (72); and large (24), medium (31), and small (59) newspapers in the ways they allocate and vary their news and editorial sections. Content analysis was used on the 114 newspapers from a constructed week. Proportions of space given to categories were the dependent variables. T-tests were used to determine differences. Because morning newspapers tend to be larger than evening newspapers, regression equations were run to control for circulation. It was concluded that the differences between morning and evening newspapers are primarily due to circulation differences. Time of publication has little relation to the allocation of space in newspapers. Circulations size makes a difference in the way news and editorial content are distributed.

Shapiro, Mitchell E., & Williams, Jr., Wenmouth. Agenda-setting in the 1982 Illinois gubernatorial campaign: The editorial and campaign frames. *Mass Communication Review*, 1986, *13*(1-3), 52-57.

Examines the relation between the public's agenda of issues and each of the aggregate, campaign, and editorial agendas presented in the front section of one newspaper during the 1982 Illinois gubernatorial campaign. The content of each story was coded into one of 10 issue categories, forming the aggregate newspaper agenda. Issues directly linked to the campaign or the two candidates formed the campaign agenda. Editorial issues made up the editorial agenda. In each case the foregoing accounts were measured in column inches; a rank order for each was obtained. In telephone interviews 326 residents reported what they considered the most important issue facing Illinois during the race, thus forming the public agenda. Significant relations were found, as a result of the application of Spearman Rho to the data, among the campaign, aggregate, and editorial agendas. The public agenda of issues was significantly correlated with campaign and editorial agendas but not with the aggregate one.

Demers, David Pearce. Use of polls in reporting changes slightly since 1978. *Journalism Quarterly*, Winter 1987, *64*, 839-842.

Examines what has happened to opinion polling practices at newspapers during the last eight years. Questionnaires were completed by 413 editors of newspapers in various daily circulation ranges. The incidence of opinion polling did not change significantly from 1978 to 1986. They were more likely to have used either consultants or polling organizations in the later date. Those not reporting poll taking for 1986 stated they lacked staff or money to do so and they were not planning to take a poll. It was concluded that opinion polling is increasingly being recognized as a professional task.

Neuwirth, Kurt; Liebler, Carol M.; Dunwoody, Sharon; & Riddle, Jennifer. The effect of 'electronic' news sources on selection and editing of news. *Journalism Quarterly*, Spring 1988, *65*, 85-94.

Investigates changes in news selection of newspapers after the introduction of electronic news sources. Content analyses were conducted of 309 news releases during March and April, 1984 and 1985, and of news stories published from these releases by two daily newspapers. The news releases were matched and compared with the published stories. The independent variables were attributes of the story content and mode of story transmission. Dependent variables were news service output, whether selected for publication, and amount of editing before publication. Nearly 37% of the news releases were published; about one-third were rewritten, while the remainder were modified. Electronic news releases were edited less than other copy. The proportion of news releases used by newspapers increased but not significantly.

Lacy, Stephen. The effects of intracity competition on daily newspaper content. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 281-290.

Determines if direct daily newspaper competition affects newspaper content. A constructed week for November, 1984, was organized for each of 114 newspapers randomly chosen. They were analyzed for selected variables. Space was measured in square inches. Direct competition was measured by the presence or absence of competitive newspapers and a measure of intensity. Twenty-one content measures were factor analyzed to see if they grouped in the news space, editorial, or budget allocations processes. The results of the factor analysis supported the hypothesis that different processes appear to be involved in creating newspaper content. It was found that competition has an impact on daily newspaper content. The effect on content comes primarily through the budget allocation process; the important measure of competition is the intensity of the competition.

Wanta, Wayne. The effects of dominant photographs: An agenda-setting experiment. *Journalism Quarterly*, Spring 1988, *65*, 107-111.

Questions if size of photographs accompanying news stories affects readers' perceptions of the prominence of the issues in the story. A different front page from altered newspapers was distributed each day to the 66 college age students who were randomly assigned to three experimental groups: one story and/or photograph dealing with one of three national issues (national defense, plight of farmers, pollution) was added. Each group received one story with a dominant photograph, one with a balanced photograph, and one with no photograph. Pre- and posttest questionnaires asked the subjects to rate 12 issues as to their importance. In the posttest a section dealing with the subjects' perceptions of the newspapers was added. Analysis of variance was computed to determine if there was a significant difference between the scores of the two tests on each of three variables: size of photograph, issue, and day of treatment. Stories with dominant photographs increased issue salience more than those without a dominant photo; a story with balanced art increased issue salience more than a story with no art.

Ammons, David N.; King, John C.; & Yeric, Jerry L. Unapproved imagemakers: Political cartoonists' topic selection, objectives and perceived restrictions. *Newspaper Research Journal*, Spring 1988, *9*(3), 79-90.

Compiles results of a mail survey with responses received from 102 newspaper editors and 69 cartoonists of editorial cartoons in major U.S. newspapers relative to the background, ideology, and working relationships of cartoonists and the topics and objectives of editorial cartoons. Editors estimated 92% of their syndicated cartoons and 53% of staff-produced cartoons addressed national and international concerns; cartoonists estimated that 58% of their work focused on such topics. The major areas of disagreement between the two groups centered on the nature of the cartoons and the relationships between the cartoonists and their newspaper. Editors see a major cause of confrontation over the content of cartoons as stemming from poor taste; cartoonists view the confrontation as one of ideological differences.

Riffe, Daniel; Sneed, Donald; & Van Ommeren, Roger L. Deciding the limits of taste in editorial cartooning. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 607-610.

Surveys through mail questionnaires 180 editorial cartoonists and 170 of their editorial page editors concerning limits of taste in editorial cartooning. Responses were received from 117 cartoonists and 93 editors. They rated on a 5-point scale their agreement with statements on sensitive subject matter and decision making. Each group saw its own members' judgment as superior to that of the other. While both samples agreed that cartoonists are good judges of taste, cartoonists were significantly more reluctant to recognize similar judgment among editors. The responses collectively support the prediction of editor conservatism on sensitive matters. Where both samples disapproved of an item, editors disapproved more strongly.

Monmonier, Mark, & Pipps, Val. Weather maps and newspaper design: Response to *USA Today*? *Newspaper Research Journal*, Summer 1987, *8*(4), 31-42.

Examines 26 newspapers in 14 cities for possible effects *USA Today* may have had on their weather pages. Tear sheets and microfilm were studied six months before *USA Today* began publication, one year later, and about 30 months later. Managing editors in 1985 completed a questionnaire about possible changes in the design of these pages in their newspapers. For all three periods a number of items were studied and compared with the target newspaper. It was concluded that most of the weather pages had changed. *USA Today* probably had some effects on these changes but not the impact many in the industry had predicted.

Tankard, Jr., James W. Quantitative graphics in newspapers. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 406-415.

Identifies 10 pitfalls to avoid in the use of informational graphics (graphs, charts, cartoons). A collection of newspaper graphics was made over a six-month period in order to list common problems in the use of graphs. The 10 pitfalls are types of graphs that are misleading, unclear, inaccurate, or unnecessary. They include tilted, stacked, pseudo, convention-violating, buried line, three dimensional, overly complex graphs, the multiple pie chart, the graph with little or no variation, and the bar graph with obscure bar ends. Examples of each one taken from newspapers are included.

Gaziano, Cecilie. News people's ideology and the credibility debate. *Newspaper Research Journal*, Fall 1987, *9*(1), 1-18.

Explores issues which may cause journalists and readers to have different frames of reference leading to differences between the two groups. The public's perceptions of media and credibility were also explored. The 1,333 participating journalists represented small-, medium-, and large-size newspapers. The public was represented by 1,469 adults in Part 1 and 1,002 in Part 2 (63% of those completing the first part). The public and the journalists were asked many of the same questions. Education and age tended to be related to attitudes toward credibility for both groups. Journalists' tendencies toward liberal philosophies are reflected in their attitudes toward credibility, the way they approach doing their jobs, coverage of different kinds of people, news judgment issues, press freedom, and evaluations of their newspapers. The public is more conservative than journalists. The two groups differed considerably in their attitudes toward credibility.

GAZIANO, CECILIE, & MCGRATH, KRISTIN. Segments of the public most critical of newspapers' credibility: A psychographic analysis. *Newspaper Research Journal*, Summer 1987, *8*(4), 1-17.

Questions what demographic and attitudinal characteristics are related to people's views on media credibility and what kinds of people are likely to view the media and press as less trustworthy. The first phase was a series of focus group discussions; the second was a national survey. From the five focus groups held in various communities, two personality types emerged as being more critical of newspapers than others, defined as "less well informed and suspicious" and the "sophisticated skeptics." In the national survey 1,002 subjects from the first part were interviewed by phone and completed a questionnaire concerning their attitudes toward the media. Results of factor analysis were given for the two groups on demographic characteristics; perceptions of media political philosophies, and of biases and opinion in media; attitudes toward how favorably media cover different groups, the media, freedom of the press; complaints about news coverage; personal experience with news; perceptions of outside influences on the media.

MURPHY, DAVID. Local press. In Jean Seaton & Ben Pimlott (Eds.) *The Media in British Politics*. Brookfield, VT: Gower Publishing Company, 1987, 90-109.

Examines how the local press in England treats particulars of political activity and how in their manufacture of news they help to define the agenda of issues which are regarded respectable politics in a liberal democracy. The local press is important because of coverage of local issues and their ability to accommodate technological and social innovation. In the production of news two problems need to be solved: signification (a news story being relevant to a perceived audience) and validation (the means by which a story is deemed accurate). Various problems the local press meets were discussed and illustrated. The ways in which alternative newspapers provide different sources of news and views to the established agenda for political debate are discussed.

GAUNT, PHILIP. Developments in Soviet journalism. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 526-532.

Studies news values in the Soviet Union and compares Soviet and American journalism. Data were derived from translations published by the United States Joint Publications Research Service and the Foreign Broadcast Information Service between 1978 and 1985 as well as other reserch reports. Soviet journalists are hampered by a number of constraints: censorship, establishment of content and approach by superiors, inadequate training. Despite ideological differences, journalistic practices in the United States and the Soviet Union rely on routine and official news sources. Changes are taking place slowly in Soviet media from pressures by a more mature audience who are eager for up-to-the-minute news and structural changes within the media themselves.

OGBONDAH, CHRIS W. Nigerian journalism: A bibliograhical essay. *Gazette*, 1985, *36*(3), 175-191.

Reviews major works on Nigerian journalism. The writer pointed out weaknesses in methodologies and corrected ambiguities and errors in some of these works. Included were reports concerning the history of the Nigerian press, the press and politics, freedom of the press and censorship.

III-12 Magazine publication

DYE, JEAN E., & HARMON, MARK D. *TV Guide*: Images of the status quo, 1970-1979. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 626-629.

Categorizes 521 *TV Guide* covers and cover stories for the years 1970-79 to determine how well it reflected the development of television. It was found that the *TV Guide* assigned a disproportionate share of coverage to regular commercial network series, ignoring the development of cable and underplaying the growth of public television. It failed to keep pace with the expansion of news and sports programming and the mini-series format.

TERRELL, ROBERT L. The first 25 years of the *Beijing Review*, an official propaganda organ of the Communist Party of the People's Republic of China. *Gazette*, 1986, *37*(3), 191-219.

Traces the history of the *Beijing Review* during its first 25 years. This report included a selective description of the first 25 years of its publication, the manner in which the Communist Party of China uses the magazine to influence the global balance of power, and the mercurial nature of China's domestic and international political posture. The magazine went through four distinct phases, each described in the paper. The magazine's circulation has fluctuated over the years, the peak period being between 1963 and 1966. Because it is intended for foreign consumption, the magazine is virtually unavailable in China except in places that cater to an international clientele. It was concluded that the *Beijing Review* faithfully presented the perspective, thoughts, and priorities of the Communist party throughout its first 25 years.

III-13 History of the press and book publication

KOSS, STEPHEN. *The Rise and Fall of the Political Press in Britain*. Chapel Hill: University of North Carolina Press, 1981.

Undertakes to trace the growth and later decline of the political conduct of the press in Britain. With the abolition of the tax on advertisements, the repeal of the stamp duty, and the abolition of the tax on paper, all in the mid-19th century in Britain, a rapid proliferation of metropolitan and provincial journals followed. Newspapers were used to formulate party programs, to implement political strategies, and to serve personal ambitions. From the mid-19th century until well into the 20th, British journalism was infused with a mission which aided in shaping British political consciousness. By the mid-20th century, newspapers had been divested of this political role.

KESSLER, LAUREN. *The Dissident Press: Alternative Journalism in American History*. Beverly Hills: SAGE Publications, Inc., 1984.

Explores the journalistic efforts of six dissident groups: black Americans; utopians and communitarians; feminists; non-English-speaking immigrants; Populists, anarchists, socialists, communists, and their splinter groups; and pacifists, noninterventionists, and resisters during World War I, World War II, and Vietnam. The groups studied span from the early 1800s to the late 1900s. A chapter is devoted to each group, presenting the historical context for the group, the formation of its press, and the goals and objectives of the dissident journalists in each group. Most dissident publications communicated both internally to a group of believers and externally to those not converted to the cause. As external communicators, dissident journals attempted to carry out two functions: education and persuasion. However, the dissident press was generally read by those who were already supporters rather than by those it wished to convert. Dissident publications were rarely read by those in power. In spite of this, those dissident publications whose ideas were ahead of but not inimical to society were able to find their way into the conventional media and into mainstream society.

Grannis, Chandler B. How the book trade survived the Great Depression. *Publisher's Weekly*, November 20, 1987, *232*(21), 19-22.

Concludes that the book industry survived the Great Depression because skilled bookmen and bookwomen ran it and knew how to find, make, and sell good books. Examples of cost-saving procedures included salary cuts, low overhead costs, cutting titles, low profit expectations, small editions. Although sales were low, book publishing was more fortunate than other industries. The reasons for this situation include continuation of the two major book clubs, the low price of books, people's return to college, the New Deal's Civilian Conservation Corps, fair practices and price stability under the National Recovery Administration. Many books remained best sellers for more than a year. Poets, novelists, and social critics published during this era.

Davidson, Cathy N. *Revolution and the Word: The Rise of the Novel in America*. New York: Oxford University Press, 1986.

Focuses on the early American novel and studies its rise, development, and importance in the early decades of the republic, with particular attention to sociological implications. The American novel developed during a time of transition from the practice of locally printing a small number of books, frequently for a designated audience, to a more centralized, mass-producing system. Opposition to the novel was intense, often coming from official sources. One chapter is devoted to *The Power of Sympathy*, identified as the first American novel, published to coincide with and take advantage of the excitement engendered by Washington's inauguration. The most popular form of early American fiction was the sentimental novel which frequently dealt with the restricted social lives of women. The novel's role in portraying political controversy and class divisions in American society are also discussed.

Sewall, Gilbert T. American history textbooks: Where do we go from here? *Phi Delta Kappan*, April 1988, *69*, 553-558.

Points out weaknesses in current American history textbooks and makes suggestions for their improvement. The format of books, often comprised of multiple typefaces, photographs, political cartoons, sidebars, study exercises, and the like, overwhelms the content. Among the weaknesses described are a lack of vivid writing; adherence to readability formulas; catering to wide audiences with different curricular, political, and religious beliefs; replacement of exciting people and events by abstract cultural groups and movements. Six suggestions were made to textbook authorities for the improvement of history textbooks.

Brannon, Gary. Some observations on map and book publishing in early America. *Cartographic Journal*, December 1987, *24*, 159-162.

Describes the beginning and early history of American publishing. The first printing press is believed to have been brought to the Colonies in 1638 by the Reverend Jose Glover and Stephen Daye. The first item printed was a broadsheet known as *The Freeman's Oath*. Around 1670 the first American illustration, a woodcut portrait of the Reverend Richard Mather, was prepared by Boston's first printer, John Foster, who is recognized as producing a *Map of New England*, the first map to be drawn, engraved, and printed in the Colonies. By the end of the 18th century printing had spread as far southward as Mississippi and westward to Ohio. Examples of literary piracy were noted. The burgeoning demand for books after the Civil War caused publishers to seek quick profit. They rushed to produce large numbers of cheap, shoddily manufactured books for the masses. Until the technique of lithography arrived from Europe, most maps and other illustrations were produced either from woodcuts or by the engraving process. Color lithography became very popular and was used on all kinds of printed material.

CLEMENT, RICHARD W. Italian sixteenth-century writing books and the scribal reality in Verona. *Visible Language*, Autumn 1986, *20*, 393-412.

Compares over several decades the early printed Italian books, especially those in Roman type, with the manuscripts prepared by scribes. The changes in these Italian books prepared in the sixteenth century were described and illustrated. The impression gained from reading reports written at that time is that *cancellaresca* was the dominant notarial script of the first half of the century, that *cancellaresca formata* supplanted it, and that *cancellaresca corsiva* reigned supreme at the end. When documents of the period have been currently examined, a different impression is gained. The most common scripts used throughout the century were the italic and the mercantilist. The writing books seemed to have little influence on the common scribes in Verona in the sixteenth century.

III-14 Juvenile literature and publications

TAYLOR, ANNE. 'Not in front of the children'—Changing social attitudes as reflected in children's fiction. *Irish Papers Presented at Fourth European Reading Congress and Tenth Annual Conference of the Reading Association of Ireland*, 1985, 51-68.

Presents a brief historical survey of children's literature from the eighteenth century through the early twentieth century and stresses characteristics of contemporary fiction. Ways in which the subject matter of juvenile fiction has broadened in scope to embrace issues formerly ignored are discussed. Explicit descriptions for various social issues are found in this literature about such topics as childbirth, sex, death, violence, homosexuality, and illegitimacy. Much of the openness is attributed to the effects of the second World War. Quotations from books written in different time periods are used to illustrate ideas given.

GIBLIN, JAMES CROSS. Children's book publishing in America: 1919 to now. *Children's Literature in Education*, Fall 1986, *17*, 150-158.

Traces by decades the highlights of children's book publication since its inception in 1919. Included in the report are the names of selected editors and authors as well as titles of popular books in each period. The founding of children's book departments in the 1920s coincided with the growth and development of public library service to children across the United States, a booming period for both. Children's books thrived in spite of the 1930 depression and World War II restrictions. Children's books after this war were largely the province of the middle class. The 1960s brought increased production of children's books because of federal funds to schools. At this time minorities were recognized, and faults in modern middle-class life were noted. A new boldness in treatment appeared. Economic pressures and a rising tide of conservatism influenced the 1970s publications. Paperback reprints of quality books, initiated by one company in the 1960s, were expanded. Although some companies stopped or limited children's book publication in the early 1980s, the field started to rebound in 1983 and 1984.

KINNELL, MARGARET. Sceptreless, free, uncircumscribed? Radicalism, dissent and early children's books. *British Journal of Educational Studies*, February 1988, *36*, 49-71.

Traces the expansion of the children's book trade in Great Britain during the last of the eighteenth and the first part of the nineteenth centuries. The expansion followed the increasing emphasis on education of children and the development of their reading habits which were considered major factors in the spread of radicalism and dissent. Educators and observers were concerned about political and social issues in these books and with the increased literacy of the masses. The works of many writers of this period are discussed, including their themes and types. The publishing and bookselling businesses of M.J. Godwin and Company and Richard Phillips were the two most important radical figures in juvenile book publication. Many of their books are listed in the report. During this period more books than ever before were distributed to the young, including a diverse selection of current opinion with the less controversial moral and religious texts.

MAVROGENES, NANCY A. A new look at the illustrations of Randolph Caldecott. *Reading-Canada-Lecture*, Winter 1987, *5*, 239-244.

Applies the Picture Potency Formula to 331 pictures in 14 of Caldecott's illustrated poems and songs for children. Ten factors considered in the formula are the different things in the picture, significant things, total things, colors, actions,children, people, things with potential for movement, size, empathy for children. A raw score for each picture was converted to a scaled score. Scaled scores were averaged for a single score. The majority of the pictures was in the medium potency category. Since Caldecott's picture books were published between 1878 and 1885, printing technology and publication techniques were more limited than they are today. Suggestions for the use of these pictures in primary classrooms are included.

WOOD, LEONARD. Who buys children's books? *Publisher's Weekly*, February 26, 1988, *233*(8), 112.

Reports Gallup studies that describe purchasers of children's books throughout 1986 and 1987 and compares them with other book purchasers. Women purchase 82% of children's books compared to 56% of general book purchasers. Children's fiction purchases comprised 70% of the purchases; general books were nearly evenly divided between fiction and nonfiction. Of all general books purchased in 1987, 60% were paperbacks; of children's books, 55% were hard covers. Children's books were less expensive than general books; they were purchased mostly for gifts (46%) while this was true of only 13% of overall book purchases.

GILLIVER, JOHN. Religious values and children's fiction. *Children's Literature in Education*, Winter 1986, *17*, 215-225.

Reviews children's fiction and sources about children's books for examples of religious values espoused in these books. The purpose of the report was to examine religious values in children's fiction since 1790 as a means of placing the present in "the perspective of a tradition of anxiety and failure." Books were cited for various values such as the following: parents assuming awesome powers, pressures concerning salvation, acts of charity, and the value of work. Changes in interpretation of religious values at different times are noted.

III-15 Effects of reading

PERRY, DAVID K. The image gap: How international news affects perceptions of nations. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 416-421, 433.

Studies the effects of unrepresentative news on the accuracy subjects form about countries, both developing and developed countries, and upon their evaluations of their judgments about these countries. The 76 undergraduate subjects answered questions about an actual developed European nation or an underdeveloped African one. They either read or did not read highly unrepresentative news about the nation. Data were analyzed using planned comparisons and one-tailed test statistics. Each participant estimated the life expectancy of a child born in one randomly assigned country and indicated how confident he was concerning his estimate. The procedure required that two subjects, one who had read the story and one who had not, answer questions about each country. The unrepresentative news reduced the accuracy of inferences and resulted in greater reductions in the accuracy of inference about developing nations than about developed nations. Developing nation subjects made significantly less accurate judgments than those who read no story. Unrepresentative news made people's evaluations of their inferences concerning developing countries more positive.

SALWEN, MICHAEL B. Effect of accumulation of coverage on issue salience in agenda setting. *Journalism Quarterly*, Spring 1988, *65*, 100-106, 130.

Examines the effect of the accumulation of issues in the news media on 880 subjects divided into three groups, each group being interviewed in different time periods. Over a 239-day period all nonadvertising content of three daily newspapers was analyzed for seven issues related to the environment. Interviews with the subjects were conducted concurrently with the ongoing content analysis, after 8, 26, and all 33 weeks, each with a different group of subjects (n = 304, 291, 285). Each subject told how important the environmental issues were to him personally and how serious these issues were in their particular city by the use of a Likert-type scale. Environmental issues in the 707 news stories analyzed were rank ordered. Spearman rank-order correlations between the issues and the responses of each group of subjects generally supported the hypothesis that public priorities of a set of issues would increase, peak or level, and then decrease as the news coverage is drawn back in time. The foregoing was especially noted in the second and third periods. Each time the descent was not as sharp as the initial increase.

RYSTROM, KENNETH. Apparent impact of endorsements by group and independent newspapers. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 449-453, 532.

Inquires if type of newspaper ownership (group, independent) made a difference in the impact of endorsement editorials on voters. Endorsements of 51 California papers were tabulated for 25 state candidate races and 158 ballot propositions during elections of 1970, 1972, 1974, 1976, 1978, and 1980 and were judged as either liberal or conservative. To determine the impact of endorsement editorials the election results in the circulation areas of newspapers and in the areas of group-owned and independently-owned papers were compared with statewide averages for various propositions and candidate races. A special formula was used for this purpose. For newspapers as a whole the split between liberal and conservative endorsements varied little over the decade. Group-owned newspapers became more liberal in their endorsements but exerted less influence on voters. Neither the newspapers as a whole nor the subgroups made much difference in the overall outcome of the statewide elections.

SHERARD, REGINA GANELLE. Fair press or trial prejudice? Perceptions of criminal defendants. *Journalism Quarterly*, Summer-Autumn 1987, *64*, 337-340.

Examines perceptions of 138 prison inmates concerning influences of media coverage on the outcomes of their cases. Precautions were taken in the interviewing of the subjects to reduce bias, such as explaining that the interviewers were not connected with the state's department of corrections. Slightly more than half said they did not have a fair trial. About half indicated their trials had been covered by local news media. Of these, 53% said their trial received minimal coverage; 32%, extensive coverage; 13%, moderate coverage. Only three felt the news coverage influenced the outcome of the trials. The chi-square test showed no relation between the extent of coverage received and the crime for which the defendant was adjudicated.

SALWEN, MICHAEL B. Credibility of newspaper opinion polls: Source, source intent and precision. *Journalism Quarterly*, Winter 1987, *64*, 813-819.

Asks if there are any interaction effects among source, source intent, and probability sampling techniques that alter credibility. Undergraduate students at a mid-size private unversity (n = 451) and at a large state university (n = 163) read public opinion poll stories and completed a questionnaire evaluating the story on 25 items. Seven items were related to trustworthiness; 7, to expertise; 4, to clarity. The stories were alike except they were manipulated on four crucial variables: who conducted the poll (source), the source's persuasive intent, whether the poll used probability sampling, and which candidate was winning. Subjects were randomly assigned to conditions. The three source conditions were the newspaper itself, the Gallup organization, and a professional survey firm from New York hired by one of the candidates. Probability and nonprobability conditions were also considered. Factors emerging from factor analysis were trustworthiness and expertise, as hypothesized. The study found those dimensions to be highly correlated and related to credibility. Two other related dimensions also emerged: objectivity and clarity. Source intent had no efect on evaluations of source credibility with the exception of the source's objectivity.

III-16 Censorship

Neuman, Susan B. Rethinking the censorship issue. *The English Journal*, September 1986, *75*(5), 46-50.

Reviews research on censorship in light of three underlying questions: Does reading significantly influence the opinions and beliefs of the reader? Does a book have one universal meaning? Are the effects of reading context independent? It was found that rather than changing opinions, reading tends to confirm our knowledge of issues and reinforces already established beliefs. Reading materials contain particular attributes that appear to have a differential effect according to information needs and personality characteristics of readers. The effects of reading depend on a convergence of influences including psychological characteristics, the content of the book, and social category similarities which people bring to their reading. Censorship is negative because it eliminates choice and discourages reading.

White, Howard D. Majorities for censorship. *Library Journal*, July 1986, *112*(12), 31-38.

Analyzes responses from American demographic groups from four General Social Surveys conducted by the National Opinion Research Center in 1976, 1977, 1980, and 1982. Each contained five questions concerning whether the subject would favor removing a book from the public library if written by a controversial type of author. Each survey had an *n* of about 1,500, the smallest subgroup being 200. Americans favoring library censorship of authors with unpopular views were always in the minority. A slightly higher percentage of women favor censorship of the five types, but neither sex gave a majority to any of the five authors. The West was generally most liberal followed by the East; the Midwest was more conservative than either but no so much as the South. Persons 60 and older support censorship by large majorities as do those with less than a high school education. More blacks than whites would censor each author. Urban-rural and religious differences were noted in attitudes toward censorship.

Rainey, Melvyn D. Handling censorship. *Reading-Canada-Lecture*, Spring 1987, *5*, 27-30.

Reviews examples of censorship of books and other reading materials in schools in the United States and Canada. Attempts to censor books have been made by individuals, private groups, and public authorities, each representing varied backgrounds and a variety of grounds for complaints. The development of wise and reasonable policies for selection and for handling challenges was considered a prerequisite for dealing consistently and fairly with censorship issues.

Hansen, Eileen. Censorship in schools: Studies & surveys. *School Library Journal*, September 1987, *34*(1), 123-125.

Reviews studies and surveys about censorship of books and other reading materials in schools and school libraries. These studies document an increase in questioning by parents and others of the types of materials used in schools. This questioning stepped up censorship activity since 1960. Reviewing these studies was complicated by apparent differences in the definition of "censorship incident." This review includes titles of books and authors questioned, the people who made the complaints and how their complaints were handled, and reasons for dissatisfaction with certain materials. Most often cited reasons were language (obsenity, profanity, incorrect grammar), violence, sexual matters.

Fort, Jerry. Censorship: Its growing effect on children's literature. *The New Mexico Journal of Reading*, Fall 1987, *8*(1), 5-8.

Reviews attempts to censor children's literature. The move towards censorship is traced to the 1950s and 1960s brought on by such changes as the desegregation of public schools, the removal of prayer, the rising drug culture, and expanding realism in literature. Changes have caused the general public to voice demands concerning what is offered children in schools and libraries. During the last decade at least 200 organizations formed by citizens concerned about public schools have been identified. These groups and state legislatures have taken an active role in censorship of school materials and books. Children's literature has come under fire more heavily in the past 10 to 15 years. Commonly cited subject matter which has been criticized include secular humanism, sex education, values clarification, profanity and offensive language, evolution, invasions of privacy. Judy Blume is the most censored of children's author's.

Young, Robert G. 'Not this way please!' Regulating the press in Nazi Germany. *Journalism Quarterly*, Winter 1987, *64*, 787-792.

Describes how Goebbels and the Reich propaganda machine controlled journal articles at their sources. *Z-D* was created to send weekly directives to the chief editors of German periodicals. Different journals were expected to handle specific themes suggested in *Z-D* in a manner appropriate for their readership. It served a postcensorship function by criticizing editors for the manner in which they treated certain subjects. Terror underlay the whole propaganda system. Secret communiques contained messages that force would be used on editors not obeying the directives. After the invasion of the Soviet Union in 1941 tighter control was placed on the periodicals; all journals were forced to subscribe to and follow the directives in *Z-D*. The most quantifiable result of this method of controlling the press was a steady decline in the number of magazines and journals published in the Third Reich.

Frei, Norbert. Reform of the German press system. *Journalism Quarterly*, Winter 1987, *64*, 793-798.

Details changes made in the German press especially since World War II. Of the 3,400 newspapers in Weimar Republic, no more than 1,000 survived under the Nazis, and these were reduced to a few after World War II, never exceeding 225. Press censorship has had a long history in Germany. During the early 1940s privately owned dailies were cut off; party-owned ones jumped in to meet the demand. When British-American troops gained control of German territory, the existing newspapers were immediately closed down. No German publishing firm was permitted to continue publishing, nor was anyone who was an editor permitted to work for the new German press. Licensing was the basic principle of press policy in the British, American, French, and Soviet zones of occupation. The groundwork for the press system of the Federal Republic was laid during the years of Allied control.

III-17 Research techniques

KOCHERSBERGER, JR., ROBERT C. Post-card questionnaires may boost response rate. *Journalism Quarterly*, Winter 1987, *64*, 861-863.

Achieves a high response rate (almost 80%) through using techniques reported in research articles and a simple, postcard format for the survey instrument. A personalized letter was sent to subjects prior to sending the questionnaire which was recorded on postcards. Efforts were made to personalize as many aspects of the study as possible. The principal limitation of this type of questionnaire is that large numbers of questions cannot be asked.

GUTHRIE, THOMAS L.; LUDWIN, WILLIAM G.; & JACOB, STEPHEN B. A parsimonious regression model to predict metropolitan circulation in outlying counties. *Newspaper Research Journal*, Spring 1988, *9*(3), 59-67.

Describes a regression model using available data. The model was illustrated by the identification of forces driving a metropolitan newspaper's circulation in outlying countries of the major market area. The use of a gravity model develops an estimate of metropolitan attractiveness to current and potential subscribers in outlying counties. The outcome is a minimal variable model that explains a high percentage of circulation variability.

CHANG, TSAN-KUO; SHOEMAKER, PAMELA J.; REESE, STEPHEN D.; & DANIELSON, WAYNE A. Sampling ethnic media use: The case of Hispanics. *Journalism Quarterly*, Spring 1988, *65*, 189-191.

Finds random digit dialing and use of Hispanic surnames yield samples which are fairly representative of the population distribution of persons with Hispanic origin in Texas. The 168 Hispanics selected by random digit dialing and the 140 Hispanics selected by surnames in telephone directories answered questions about their media use, including those in the Spanish language. The only significant difference between the two groups was that the Hispanics selected by surnames were more likely to use ethnic TV than those in the other group. The completion rate for the ethnic name method was 69.6% and the refusal rate, 8.8%; for the random digit dialing method, 55.1% and 21.1%, respectively.

FAIR, JO ELLEN. A meta-research case study of development journalism. *Journalism Quarterly*, Spring 1988, *65*, 165-170, 177.

Applies meta-research techniques to development journalism. The 20 studies used, each as a unit of analysis, carried out an analysis of content, published between 1967 and 1986. Each framework was examined by the following variables: type of theoretical framework, purpose of the study, conceptual and operational definitions of developmental journalism and national development, and the role of journalism/mass media in national development. Variables were determined for each of the above. Content analysis was used. This study revealed a number of very difficult conceptualizations, operations, measurements, findings, and conclusions. There was little concensus as to what development is, how to study it, and what it means in a national development context.

IV. *Physiology and psychology of reading*

IV-1 Physiology of reading

SIMONS, HERBERT D., & GRISHAM, J. DAVID. Binocular anomalies and reading problems. *Journal of the American Optometric Association*, July 1987, *58*, 578-587.

Reviews and evaluates the research evidence on the relation of binocular anomalies to reading. It is concluded that the literature suppports the claim that binocular problems are involved in children's reading problems. In particular the following appear related to reading problems: exophoria at near, lowered fusional vergence reserves, aniseikonia, anisometropia, convergence insufficiency, and fixation disparity. Weak evidence exists for esophoria at near and mixed evidence for stereopsis. Distance lateral phorias and vertical phorias appear to be unrelated to reading.

HELVESTON, EUGENE M; WEBER, JANET C.; MILLER, KATHLEEN; ROBERTSON, KAREN; HOHBERGER, GEORGE; ESTES, ROBERT; ELLIS, FORREST D.; PICK, NINA; & HELVESTON, BARBARA H. Visual function and academic performance. *American Journal of Ophthalmology*, March 1985, *99*, 346-355.

Initiates a study of the relation between visual function and academic performance. Evaluated were 1,910 first-, second-, and third-grade pupils in one school district. Visual function tests included measures of visual acuity, muscle balance, preferred eye and hand, color vision, refraction, sensory and motor function, and a writing and drawing task. Academic performance was assessed by the *Metropolitan Readiness Test*, the *Cognitive Abilities Test*, the *Iowa Test of Basic Skills*, and a teacher evaluation of the reading grade level for each child. Children were divided into those who were reading above, at, and below expected levels based on the academic measures. Above-average, average, and below-average readers were statistically the same with regard to ocular findings.

SKAGSETH, P.A. Dyslexia and visual problems. In Yngve Zotterman (Ed.) *Dyslexia: Neuronal, Cognitive & Linguistic Aspects*. New York: Pergamon Press, 1982, 133-138.

Reports findings of a specialized visual and orthoptic examination administered to all beginning first year pupils (n = 3442) in Bergen, Norway. The examination had two purposes: (1) to determine if routine examinations were adequate, and (2) to note any relation between dyslexia and visual difficulties. Information was collected concerning the following: visual acuity, stereoscopic vision, strabismus, fusion, convergence, bifoveal fixation, and dominant eye and preferred hand. Of those tested, 106 were found to be in need of orthoptic/ophthalmological treatment. Twelve of this group were among a group of 233 who had been referred as dyslexic. In the remaining 221 dyslexics, the orthoptic examination showed normal.

ROSNER, JEROME, & ROSNER, JOY. Comparison of Visual characteristics in children with and without learning difficulties. *American Journal of Optometry and Physiological Optics*, July 1987, *64*, 531-533.

Compares selected visual characteristics of children with and without learning disabilities (LD). A total of 757 children who had been evaluated at a university optometry clinic were categorized as LD or non-LD. The children ranged in age from 6 to 12 years. A count was made of the number and percentage of children receiving six types of diagnoses: ametropia, vergence and/or accommodation infacility, strabismus, amblyopia, miscellaneous, and visual perceptual dysfunction. Results found significant differences in two areas. Ametropia was significantly more prevalent in the non-LD group and perceptual skills dysfunction in the LD group. Myopia was more prevalent among the non-LD students and hyperopia among the LD group. Astigmatism occurred about equally in both groups.

HYVÄRINEN, L., & LAURINEN, P. Ophthalmological findings and contrast sensitivity in children with reading difficulties. In Yngve Zotterman (Ed.) *Dyslexia: Neuronal, Cognitive & Linguistic Aspects*. New York: Pergamon Press, 1982, 117-120.

Completes an ophthalmological examination on 40 Finnish children selected by their remedial teachers as having reading difficulties. Included in the visual examination were standard measurements of the best corrected central visual acuity at a distance of 5 m and near acuity at 40 cm, mobility, fixation behavior, binocularity, accommodation, color vision, and visual fields. Spatial contrast sensitivity function was determined for 20 children. One-third of the 40 children had minor visual abnormalities. The authors note that the prevalence of high refractive errors and abnormal binocular functions was higher in this group than that reported among children of the same age. Temporal integration of visual information was assessed for six good readers and five poor readers. Contrast sensitivity was higher for good than for poor readers, and temporal integration appeared to be different in the two groups.

Wilsher, C.R., & Taylor, J.A. Commentary: Tinted glasses and dyslexia. *Journal of Research in Reading*, February 1988, *11*, 50-52.

Raises questions concerning claims that dyslexics improve their reading skills after being prescribed tinted glasses. The author reviews the limited research done on this topic and notes the need for well controlled studies to be done.

Pollatsek, Alexander; Rayner, Keith; & Balota, David A. Inferences about eye movement control from the perceptual span in reading. *Perception & Psychophysics*, August 1986, *40*, 123-130.

Examines first-fixation duration and the gaze duration on the target word as a function of how far the eye was from the beginning of a target word on the previous fixation. Participants were 30 paid volunteers, all members of a university community. Materials consisted of 100 experimental sentences, each extending over two lines. The target word could appear on either line, but was never at the beginning or end of a line. Sentence frames were written so that two alternative words could appear in a critical word location. Prior to fixation of the target word, a letter string in the target location (at that time in the parafovea) was either visually similar or visually dissimilar to the target word. Findings indicated that letter information was extracted from the target location when the eyes were at least nine characters from it. At such far distances, the parafoveal information extracted affected only the gaze duration on the target word; at nearer distances, it affected both the gaze duration and the first-fixation duration. Lengths of saccades and times to examine words were positively correlated: a longer saccade onto the target word was associated with longer gaze durations on both the target word and the prior word, and skipping the target word was associated with a longer last fixation on the previous word.

Inhoff, Albrecht Werner, & Rayner, Keith. Parafoveal word processing during eye fixations in reading: Effects of word frequency. *Perception & Psychophysics*, December 1986, *40*, 431-439.

Measures eye fixations in reading to determine whether word frequency affects the processing of the fixated word and the processing of the word to the right of the fixated word (parafoveal word). Subjects were 24 university students. Materials consisted of 60 pairs of sentences of the form phrase-verb-noun phrase (NP-V-NP) in which the initial NP comprised the sequence: article-adjective-noun. Sentence pairs were identical except for the noun of the initial NP, termed the target, which was either a high-frequency or a low-frequency word. Target nouns were matched on length, concreteness, and number of syllables. The 60 sentences were presented in blocks of 20, with half of the sentences containing high-frequency targets and half, low-frequency targets. Each block of sentences was presented in one of three conditions: (1) full-line with the entire line of text available, (2) two-word-window with all text to the left of the word currently fixated and the word immediately to its right provided, and (3) one-word-window fixation in which only the currently fixated word and text to the left of fixation were available during a fixation. For half the subjects, all letters outside the experimentally determined window were replaced by confusable letters; for the remaining subjects, all letters outside the window were replaced by Xs. Results showed shorter fixations on high-frequency than on low-frequency target words. Readers gained more effective previews from high-frequency parafoveal target words than from low-frequency parafoveal target words.

RAYNER, KEITH; BALOTA, DAVID A.; & POLLATSEK, ALEXANDER. Against parafoveal semantic preprocessing during eye fixations in reading. *Canadian Journal of Psychology*, December 1986, *40*, 473-483.

Records eye movements of 24 adults as they read sentences, and a display change occurred before they fixated on a critical target word. Forty pairs of semantically related words were selected as target words. For each pair, there was also an unrelated word of the same length and a visually similar nonword. Thus one of the four alternative words was initially present in the target word location in the sentence. When subject's saccade crossed an invisible boundary location, the initially displayed alternative was immediately replaced by the target word. The boundary location was always the next to the last letter in the word to the left of the target word. Sentences were presented on two lines, and the target word never appeared at the beginning or end of either line. Gaze duration on the target word was the primary dependent variable. Gaze duration was computed also for the word fixated prior to and following the target word. While the visually similar preview facilitated processing almost as much as the target itself, there was no difference between the semantically related preview and the unrelated preview. It is felt that the results are inconsistent with a model in which words in parafoveal vision are semantically preprocessed; rather, they were felt to be consistent with a focussed attention model. It was concluded that the meanings of unidentified parafoveal words do not modulate our reading performance.

SLOWIACZEK, MARIA L., & RAYNER, KEITH. Sequential masking during eye fixations in reading. *Bulletin of the Psychonomic Society*, May 1987, *25*, 175-178.

Deals in two experiments with the extent to which letters are processed serially in a fixation in reading. Numbers were 9 and 10, respectively, in the two experiments. In Experiment 1, sentences were displayed with three masking regions: (1) a 7-character mask, (2) a 15-character mask, and (3) no mask. There were two types of masks, simultaneous and sequential, and four delay conditions. Subjects read eight sentences in each condition and eight sentences in the no-mask condition. In Experiment 2, all reading was done with a moving window, which prevented the reader from seeing the letters beyond the specified number for a given window size. Four 7-character masking conditions were used. Two conditions used simultaneous masks at 30-msec and 50-msec delays. The other two conditions used sequential masks similar to those in Experiment 1. A no-mask control condition was also included. Taken together, results of the two experiments were inconsistent with a serial letter processing model during reading. In Experiment 1, results were consistent with a serial scan and input rate of 10 msec per letter during an eye fixation. However, in Experiment 2, when readers did not have an opportunity to do any prior processing of parafoveal letters, there were significant differences in reading rates between the condition in which the entire 7-character region was masked after 50-msec and the condition in which the central characters were masked sequentially. It was concluded that the advantage that the central characters appear to have derived from prior processing when those letters are in parafoveal vision and not from a sequential letter scan.

NEWMAN, STANTON; LAMB, ROSEMARIE; & CIVIL, MICHAEL. Eye movements and sequential tracking: An effect of reading experience. *Perceptual and Motor Skills*, October 1986, *63*, 431-434.

Investigates the stability of eye movements of adult skilled readers on a sequential light-tracking task. Included were 24 adult English subjects and 12 adult Iraqi subjects, the latter customarily reading script in a right-to-left direction. Eye movements were recorded as subjects viewed lights moving first in a left-to-right direction and second in a right-to-left direction. Both groups demonstrated less stable eye movements when performing the tracking task in a direction counter to that in which they normally read text.

Blanchard, Harry E., & Iran-Nejad, Asghar. Comprehension processes and eye movement patterns in the reading of surprise-ending stories. *Discourse Processes*, January-March 1987, *10*, 127-138.

Monitors eye movements of skilled readers as they read three stories with surprise endings. Subjects, 22 graduate and undergraduate students, read text one line at a time on a cathode ray tube. Three surprise ending mystery stories were adapted from a magazine and each prepared in experimental (original surprise ending) and control (surprise ending given away at beginning of story) versions. Subjects read either a control or experimental version of each story, with each reader receiving at least one story in the experimental form. There was a significant increase in reading time on the selected lines in the experimental condition over the control condition. There were more fixations associated with rereading the surprise lines when compared with the same lines in the control condition. A small increase in the mean duration of fixations on the surprising lines was found, but there was no change in mean saccade length.

Ben-Nun, Yocheved. The use of pupillometry in the study of on-line verbal processing: Evidence for depths of processing. *Brain and Language*, May 1986, *28*, 1-11.

Investigates, in three experiments using pupillary measurements, the effect of context and task demand upon the perception and resolution of lexical ambiguities. Subjects numbered 40, 36, and 20, respectively, in the three experiments. Three sentence types (ambiguous, disambiguous, control) were tested under three conditions (recall, define, and choose best meaning). All types of ambiguous sentences had higher pupillary curves than unambiguous sentences, with a sharp rise in pupil size following the homophone. Differences were observed in total sentence rise among the three task demands, such that the definition task was higher than recall, while the choice task exhibited a continuing rise after the sentence, which both other tasks did not have.

Bub, Daniel N., & Lewine, Jeff. Different modes of word recognition in the left and right visual fields. *Brain and Language*, January 1988, *33*, 161-188.

Reports a series of four experiments that examine various modes of word recognition in the two visual fields. Subjects in all experiments were college students. In Experiment 1, it was found that word length had a substantial effect on word recognition in the left visual field (LVF) but a weaker effect in the right visual field (RFV) and fovea. In Experiment 2, the effects of orientation and length of stimulus on word recognition were investigated. Although the effect of word length was much less apparent when words were presented vertically, LVF performance continued to be more strongly influenced by length than performance in the RVF and fovea. Experiment 3 focused on a sample of left-handed subjects. As a group they were found to be less consistently lateralized than right-handers and less affected by word length in the LVF. Experiment 4 tested the length by field interaction observed in the previous studies in lexical decisions that do not require the pronunciation of written words. More specifically, word length and imageability were manipulated. Concrete, high-imageable words produced a smaller effect of length in the LVF than abstract, low-imageable words.

Kramer, Arthur F., & Donchin, Emanuel. Brain potentials as indices of orthographic and phonological interaction during word matching. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, January 1987, *13*, 76-86.

Studies the effects that interaction between orthographic and phonological codes may have on both overt responses and event-related brain potentials (ERPs). Subjects were 40 undergraduates selected on the basis of *Nelson-Denny Reading Test* scores, with half selected from the upper 20th percentile and half from the lower 50th percentile. The 200-word pair stimuli were selected from four different lists: (1) rhymed and looked alike, (2) rhymed but did not look alike, (3) looked alike but did not rhyme, and (4) neither looked alike nor rhymed. Electroencephalogram and electroculogram recordings were taken while subjects performed a word-comparison task in each of two conditions: (1) if the words looked alike (orthographic match), and (2) if the words rhymed (phonological match). Each subject received all the word pairs in each condition on a cathode ray tube. Reaction time (RT) and error data were collected. RT and error percentage increased whenever there was a conflict between the orthography and phonology of the words. The N200 component of the ERP suggested that subjects were capable of detecting phonological differences between words within 260 ms from the presentation of a word pair. Amplitude of N200s also varied with the degree of mismatch between words. N200s were largest when both orthography and phonology mismatched, of intermediate amplitude when either mismatched, and smallest when both matched. P300 latency increased whenever there was a conflict between the two codes. It was concluded that the data suggested that the extraction of orthographic and phonological aspects of words occurred early in the information processing sequence.

Schwartz, Steven; Montagner, Susanna; & Kirsner, Kim. Are there different methods of lexical access for words presented in the left and right visual fields? *Brain and Language*, July 1987, *31*, 301-307.

Replicates a study on the interactive effects of word length and visual hemifield on the recognition of English words but with two changes. The 30 adult subjects were presented three- and five-letter words flashed in pairs on a screen. Words were presented bilaterally either in original pairs or as a mirror image of the pairs. Subjects were to report the word that an arrow pointed to first, followed by the other word. Unlike the previous research, both three- and five-letter words were more difficult to recognize in the left visual field than in the right visual field. Five-letter words were more difficult to recognize than three-letter words in the right visual field; there were no differences in the left visual field. It is argued that the new data demonstrate that the visual field differences reported in the previous study were the result of perceptual asymmetries rather than different methods of lexical access in the two visual fields.

Katayama, Jun'ichi; Fujiwara, Yoshimi; & Yagi, Akihiro. Event-related brain potentials to nonwords and semantically different words. *Perceptual and Motor Skills*, December 1987, *65*, 871-874.

Examines differences in the negative components in event-related brain potentials (ERPs) elicited by nouns belonging to the same category (C), to other categories (NC), or by nonwords (NW). The 10 adult subjects were presented nouns and nonwords of 2 to 7 letters of the Japanese phonogram *Katakana* on a screen. Of the 40 stimuli presented in each of the 15 sessions, 24 were C words, 8 were NC words, and 8 were NW. Subjects were asked to detect NW and to press a key. Negative components with latencies of about 250 to 500 msec, designated as N2, began to separate between NW and C and NC at about 250 msec after stimuli. Separations between NC and C were observed in later N2s. It was felt that differences in latencies and amplitudes of N2s among the three stimuli might reflect differences of time course of processes.

DREWS, ETTA. Qualitatively different organizational structures of lexical knowledge in the left and right hemisphere. *Neuropsychologia*, 1987, *25*(2), 419-427.

Investigates the organization of lexical knowledge in the intact left and right hemisphere within the framework of hemisphere-specific cognitive modes of processing. Subjects were 20 male and 20 female right-handed German adults. Materials consisted of 160 word pairs of concrete German nouns, each with a maximum of five letters. Word pairs were divided into three groups: (1) 40 word pairs in which both words belonged to the same level of a certain semantic category (coordinate relation, CR), (2) 40 word pairs in which each target word described a typical local context for the prime word such as shepherd-pasture (locative relation, LR), and (3) 80 pairs without any semantic relation between the members of each pair (semantically unrelated, SU). Two slides were prepared for each item, so that each stimulus could be projected to both the left visual field (LVF) and the right visual field (RVF). Subjects were to decide if the two words, shown in quick succession on a screen, were related in some way by pressing a button. Results supported a hemisphere-specific efficiency of processing. Overall the left hemisphere (RVF/RVF) showed a better performance level than the right hemisphere (LVF/LVF). In the left hemisphere, performance favored CR, and in the right hemisphere, performance favored LR.

HERMANN, HOWARD T.; SONNABEND, NANCY L.; & ZEEVI, YEHOSHUA Y. Interhemispheric coordination is compromised in subjects with developmental dyslexia. *Cortex*, September 1986, *22*, 337-358.

Compares developmental dyslexics (DDs) and good readers (GRs) on measures of interhemispheric coordination. The six DDs ranged in age from 16 to 47 years, while GRs were 20 to 24 years old. Subjects, all of whom demonstrated normal oculomotor control and visual acuity, were instructed to track three different point-light source patterns presented in random sequence and arrayed horizonatally at 5, 10, 15 degrees of eccentricity. The patterns included single stimulus in one hemifield, dual stimuli in one hemifield, and a pair of simultaneous, symmetric, bihemifield stimuli (SSBS). On unihemifield stimuli, all subjects demonstrated normal saccadic latencies and trajectories. Relative to SSBS, all GRs showed a pronounced directional preference, and chose largely to track one side over the other. However, DDs showed reduced laterality bias. DDs also exhibited significantly longer response latencies to SSBS than to unihemifield stimulation and differed significantly from GRs.

FISCHLER, IRA; JIN, YOUNG-SUN; BOAZ, TIMOTHY L.; PERRY, JR., NATHAN W.; & CHILDERS, DONALD G. Brain potentials related to seeing one's own name. *Brain and Language*, March 1987, *30*, 245-262.

Determines event-related brain potentials (ERPs) associated with seeing one's own name. Nine undergraduates enrolled in an introductory psychology class participated. Subjects were given an assumed name (AN) and then presented with a series of sentences on a cathode ray tube. They were to respond to the AN with a true response and to all other names, including their own, with a false response. Response latency time, EEG, and EOG were recorded. Three classes of names were used: AN, subject's name (SN), and false name (FN). ERPs for the three classes of names were distinctive. The N380 to SN was more similar to the FN than to the AN, suggesting that the sentence context's priming of the various names was under the subject's attentional control, and that the late negativity could be modulated by this attention. In contrast, a large P510 feature distinguished SN from FN, and this difference was unaffected by practice. This was interpreted as indicating that a highly overlearned and salient stimulus such as one's own name continues to produce a distinctive neural response even in cases where the context allows anticipation of one verbal event such as the AN.

Conners, C.K.; Reader, M.; Reiss, A.; Caldwell, J.; Caldwell, L.; Adesman, A.; Mayer, L.; Berg, M.; Clymer, R.; & Erwin, R. The effects of piracetam upon visual event-related potentials in dyslexic children. *Psychophysiology*, September 1987, *24*, 513-521.

Investigates the effects of piracetam on the event-related potentials of 29 dyslexic children, aged 7-6 to 12-11. Subjects were randomly assigned to piracetam or a placebo for the 36 weeks of the study. All children had either performance or verbal IQ scores on the WISC-R greater than 90 and the other score at least 80. Neither parent/child, investigator, or examining staff knew which children were on piracetam or a placebo. Children saw letters (X, L, V, T) and shapes appear one at a time on a screen and were instructed to press a button whenever they saw any two letters or any two shapes in a row, whether they were the same or different. Piracetam produced a small but reliable increase in accuracy compared with the placebo. This effect was evident only for letter-hits, and was most apparent when both hits and errors were combined into a single score. It was concluded that piracetam enhanced feature analysis and increased attentional resources when the stimuli were recognized as having linguistic significance.

Rumsey, Judith M.; Dorwart, Robert; Vermess, Michael; Denckla, Martha B.; Kruesi, Markus J.P.; & Rapoport, Judith L. Magnetic resonance imaging of brain anatomy in severe developmental dyslexia. *Archives of Neurology*, October 1986, *43*, 1045-1046.

Examines the brain anatomy of 10 men, aged 18 to 28, with persistent, severe developmental dyslexia using magnetic resonances imaging (MRI) techniques. Full-scale IQs on the WAIS-R ranged from 85 to 121; scores on the *Gray Oral Reading Test* ranged from grade level 1.8 to 8.3. In addition, deficiencies in decoding of nonsense words were found on the *G-F-W Reading of Symbols Test*. Educational levels ranged from 10th grade to a Master's degree. Results of 9 of the 10 MRI examinations were clinically normal. Thus MRI failed to identify a common focal pathology.

Galaburda, A.M. Neuroanatomical aspects of language and dyslexia. In Yngve Zotterman (Ed.) *Dyslexia: Neuronal, Cognitive & Linguistic Aspects*. New York: Pergamon Press, 1982, 3-10.

Conducts an anatomical observation on the brain of a 20 year-old left-handed male who had experienced severe difficulties with reading during his lifetime. Although no gross abnormalities showed, microscopic examination showed a number of malformations were present. Congenital malformations of cortical structures related to language were found.

Corballis, Michael C.; Macadie, Lindy; & Beale, Ivan L. Mental rotation and visual laterality in normal and reading disabled children. *Cortex*, June 1985, *21*, 225-236.

Times normal and reading disabled children, ages 11 to 13, as they named lower-case *b*s and *d*s presented tachistoscopically in varying angular orientations in the left- and right-visual hemifields. Subjects included 10 disabled readers and 10 normal readers, matched for age, sex, and IQ. Normals had reading ages commensurate with chronological age; disabled readers were at least two years behind age norms on the *Burt Word Reading Test*. Stimuli were presented to the right or left visual hemifield in six different angular orientations: 0°, 60°, 120°, 180°, 240°, or 300° clockwise from the normal upright. Reaction times to identification in which letters were presented only in upright orientation were subjected to analysis of variance to assess the influence of groups, visual hemifields, and letters. There were no significant effects. However, hemifield data revealed considerable variation in the reading disabled group while controls gave relatively homogeneous results. Controls showed a right-hemifield advantage, while reading disabled children did not show any overall lateralization. On the rotation task, the two groups did not differ in accuracy of discrimination or in the estimated rate of mental rotation. There were no significant hemifield differences. It is felt that the data confirm previous findings that disabled readers may suffer from a lack of left-hemispheric specialization.

Beaton, Alan. *Left Side, Right Side: A Review of Laterality Research.* New Haven: Yale University Press, 1985.

Draws together various strands of research into laterality and reviews findings and issues spanning a period from approximately 1962 on. Each chapter brings together research findings concerning asymmetry of brain function on a specific topic (e.g., handedness, sex differences, emotionality) and presents theories which have been devised to explain them. In particular, two chapters, 5 and 9, are closely related to reading. Chapter 5 reviews literature concerning language laterialization in right and left handed people. Under a section in that chapter headed "Deep dyslexia," the author concludes that the right hemisphere does possess some word processing capacity, particularly for concrete or early-learned words. Chapter 9 deals specifically with reading disability, beginning with a review of Orton's work and studies concerning manual laterality. It is noted that there is much confusion in the research literature, stemming at least partially from the inadequate assessments of handedness utilized in many studies. Also attempts to assess hemispheric asymmetry in disabled readers by means of the divided field technique have been troubled with methodological problems. The author notes that differences in performance asymmetry between various subject groups may be due to differences in reporting or processing strategies. It is also noted that most of the studies have failed to distinguish between reading retardation and difficulties of a genuinely dyslexic nature.

Corballis, Michael C. *Human Laterality.* New York: Academic Press, 1983.

Devotes Chapter 8 to a discussion of the evidence relating developmental disorders of language to anomalies of lateralization. Under the heading of Developmental Dyslexia is discussed Orton's dominance theory, laterality and dyslexia, types of dyslexia, spatial problems in dyslexia, sequencing problems in dyslexia, inheritance of developmental dyslexia, and sex differences in reading disability. Shorter sections are devoted to Stuttering and Developmental Dysphasia. Among his conclusions, the author states that there is little evidence that left-right confusions are related to the degree of cerebral lateralization. It is also noted that there are many inconsistencies in the evidence about dyslexia to date as well as a number of unresolved issues. Despite these, there has been persistent evidence relating disorders of speech and langauge to anomalies of cerebral lateralization.

Bryden, M.P. *Laterality: Functional Asymmetry in the Intact Brain.* New York: Academic Press, 1982.

Reviews the evidence pertaining to cerebral asymmetries in the intact human brain. Two issues are the main concerns: (1) can the different functions of the two cerebral hemispheres be assessed reliably with noninvasive techniques, and (2) do the patterns of cerebral asymmetry relate to meaningful behavior in any consistent way. It is the author's view that a number of studies supposedly dealing with cerebral asymmetries do not actually do so. Despite this, there exist sufficient consistencies to assume that cerebral asymmetries can be measured and that they do have some consequences for normal behavior. Each chapter in the book deals with the literature on a specific topic; for example, Chapter 14 views six differences in laterality. Of special interest is Chapter 15 which focuses on deficits in reading and language. The evidence thus far indicates little support to suggest that left-hemispheric language processing and right-hemispheric spatial and integrative systems are any better or worse than the reverse organization. It is noted that the research is replete with unreliable instruments, experimental effects that have contaminated results, poor methodology, and contradictory evidence. Even so, there is still a suggestion that bilateral representation of function is associated with deficit. Poor performance in some instances is associated with weak lateralization or bilateral representation.

BRADSHAW, JOHN L., & BRADSHAW, JUDY A. Reading mirror-reversed text: Sinistrals really are inferior. *Brain and Language*, January 1988, *33*, 189-192.

Compares right- and left-handed adults on ability to read a range of geometrically transformed texts. Subjects were university students and were equally divided by sex into two groups of 24 each. Handedness was determined by preferred hand for writing. Speed and accuracy measures were recorded as subjects read lists of words presented as normal and in five transformations of text, including mirror-reversed. A three-way ANOVA was performed on the time data and another on the error data. Left-handed subjects were either not different from or were slightly inferior to right-handed subjects in reading most transformations.

KRAFT, R. HARTER. Laterality and school achievement: Interactions between familial handedness and assessed laterality. *Perceptual and Motor Skills*, December 1985, *61*, 1147-1156.

Focuses on the interaction among familial handedness, assessed hand preference, and ear laterality for dichotically presented stimuli with achievement test performance. Subjects were 179 children, ages 8 to 12, who could be classified into a familial handedness subgroup, and who had no history of neurological problems, hearing impediment, or learning disability. For all, English was their first and major language. A hand preference and eye preference index were computed for each child. Familial history of handedness was determined by parental report. the reading, spelling, and arithmetic subtests of the *Wide Range Achievement Test* (WRAT) served as achievement measures. Two types of dichotic stimuli, digits and nonverbal sounds, were used to assess ear laterality. A right-ear advantage for verbal stimuli was associated with high WRAT achievement for children having a right-hand perference and a family history of dextrality. No ear advantage for verbal stimuli (or bilaterality) was associated with high achievement for familial sinistral children.

KRAFT, R. HARTER; HSIA, T.C.; ROBERTS, T.; & HALLUM, A. Reading comprehension performance and laterality: Evidence for concurrent validity of dichotic, dichhaptic and EEG laterality measures. *Neuropsychologia*, 1987, *25*(5), 817-827.

Records electroencephalographic (EEG) measures while right-handed boys were engaged in reading and answering questions about passages. Twenty-five boys were in grades one and two, and 30 were in grades five and six. Subjects were individually tested for hand-eye preference on activities adapted from the *Edinburgh Inventory*, for reading ability with the *Silvaroli Inventory*, and for EEG activity. Within a six-month interval of these tests, 49 of the boys received dichotic and dichhaptic tests. EEG measures were taken as subjects silently read two passages from another form of the Silvaroli and answered three orally presented factual questions on each passage. Stepwise hierarchial regression analyses were computed to determine (1) the relation between each of the reading brainwave ratio scores and the dichotic/dichhaptic laterality scores, and (2) the relation between reading comprehension scores and the brainwave and dichotic/dichhaptic laterality scores. For older right hand/eye preference boys, a right-ear advantage for recalling verbal stimuli was related to bilateral parietal processing during silent reading; both bilateral parietal activity during silent reading and a right-ear advantage for verbal stimuli were related to high reading comprehension scores. High reading ability was related to increased left hemispheric activity during silent reading in the younger age group and to bilateral activity in the older strong right hand/eye boys.

MAMEN, MAGGIE. Laterality patterns in young fluent readers. *Brain and Language*, January 1987, *30*, 81-92.

Examines and compares various laterality patterns in kindergarten fluent readers, kindergarten nonreading controls, and second graders of equivalent reading levels. There were 20 children in each group, all of whom had been screened using the *Woodcock Tests of Reading Mastery*, Word Identification and Passage Comprehension subtests, and the *Slosson Intelligence Test*. Children were individually administered the *Finger Tapping Test*, the *Dichotic Listening Test*, and a test of intersensory integration. Parents of kindergarten children were sent a questionnaire asking for various environmental and background data. Multivariate analyses involving the laterality measures failed to discriminate between the two groups matched on reading level, but did differentiate between the two kindergarten groups. Correlation coefficients among the measures were significant only for the kindergarten fluent readers, with greater bilaterality of both fine motor and linguistic functions associated with better intersensory skills.

GROGAN, SARAH. Hemispheric laterality for spatial analysis in children with reading problems. *Perceptual and Motor Skills*, October 1986, *63*, 537-538.

Studies lateralization for tactile-spatial perception in 21 right-handed dyslexic boys, ages 10 to 15 years, and 21 controls, matched for age, sex, handedness, nonverbal IQ, and socioeconomic status. The task was to feel pairs of shapes, one presented to each hand, and to identify them on a visual array illustrating the two target shapes and four distractors. Controls recognized significantly more shapes with the left hand than with the right. No difference was found between left- and right-hand scores of dyslexics. Findings were interpreted as indicating that dyslexics may be processing spatial material less discretely in the right hemisphere than normal readers.

FOUNTAIN, JUANITA CUMMINGS, & FILLMER, H. THOMPSON. Hemispheric brain preference: What are the educational implications? *Reading Improvement*, Winter *1987*, *24*, 252-255.

Designs a study to investigate the relation between hemispheric brain preferences and academic failure or success. Subjects were 131 fourth- and seventh-grade pupils with IQs 90 or above who were reading at or above grade level. The reading, mathematics, language subtest scores and the basic battery score on the *Metropolitan Achievement Test* (MAT) were used for academic performance. Children were assigned to the right hemisphere preference group, the left hemisphere preference group, or the integrated hemisphere preference group based on performance on the 36-item *Your Style of Learning and Thinking* inventory. A significantly greater number of girls than boys showed an integrated brain preference pattern. At grade four, pupils who were integrated brain preference children achieved higher on all MAT measures than did children in other groups. At grade seven, integrated preference boys scored significantly higher in mathematics and the basic battery than did integrated preference girls.

ZENHAUSERN, ROBERT. Eyes right. *Teaching K-8*, May 1988, *18*(8), 76-78.

Relates briefly the findings of a study claiming that rightward Lateral Eye Movements (LEM) are indicative of semantic disabled reading. A total of 81 third-, fourth-, and fifth-grade children in one New York suburban school who scored at least one year below grade level on the *Stanford Achievement Test* were examined. Thirteen of the pupils showed predominantly rightward LEM in a face-to-face situation, while 68 had predominantly leftward LEM. Another 13 superior readers served as controls. All children were given the following tests: rhyme test, shape test, word-match stimuli, word/picture test, and synonym/antonym stimuli. The word-match stimuli consisted of 20 word pairs (one word in upper case and the other in lower case) which were either the same word or different words. The synonym/antonym stimuli consisted of words which meant the same or the opposite. The word/picture test consisted of 20 word/picture pairs in which the word and picture did or did not represent the same stimuli. It is reported (no data presented) that readers with rightward LEM made significantly more errors on these three measures than did children in the other two groups.

WAGNER, STEVEN R. Handedness and higher mental functions. In Malcolm P. Douglass (Ed.) *Claremont Reading Conference Forty-Ninth Yearbook*, 1985, 258-266.

Attempts to answer questions related to handedness and higher mental functions among learning handicapped (LH) students. Thirty-five teachers of LH children administered a hand preference test to 272 students in grades three through 12. For 176 of these children, scores were obtained on the WISC-R IQ, *Wide Range Achievement Test* in reading and mathematics, *and the Peabody Individual Achievement Test*. The percentage of left-handed children in LH classes was 15%, while 43% were mixed-handed. No statistically significant differences between verbal and performance IQ scores were noted for right-handed, left-handed, or mixed-handed subjects. Both right- and left-handed children performed better than the mixed handed group in reading. No differences were found in reading between right- and left-handed groups. Left-handed children did better in mathematics than did either of the other groups.

VAN GIESEN, ANGELA M.; BELL, MICHAEL L.; & ROUBINEK, DARRELL L. Comparing right and left brain dominant students on reading achievement scores. *Reading Improvement*, Winter 1987, *24*, 267-272.

Compares the reading achievement scores of children with left brain, right brain, and integrated dominance. A sample of 64 low-achieving fourth- and fifth-grade pupils were administered the *Gates-MacGinitie Reading Test* and the *Hemispheric Cognitive Style* survey. Although the left-brained group scored higher than the other two groups on both vocabulary and comprehension, the difference was not significant. Females significantly out-performed males in both vocabulary and comprehension.

HOWELL, J.R., & BRYDEN, M.P. The effects of word orientation and imageability on visual half-field presentations with a lexical decision task. *Neuropsychologia*, 1987, *25*(3), 527-538.

Uses two experiments to examine the effects of word orientation and word imageability in a visual half-field procedure. Stimuli in both experiments consisted of 168 four-, five-, and six-letter nouns and 168 pronounceable nonwords. Adult subjects numbered 40 and 24, respectively, in the two experiments. In Experiment 1, half the stimuli were horizontally aligned and half were vertically aligned. Two sets of 336 cards were made, with stimuli that were to the left of center in one set being to the right of center in the second set. Subjects were to indicate if an item was a word or nonword by pressing a set of buttons. Reaction times and errors were recorded. Experiment 2 was identical except that half the subjects were first given 168 trials with horizontally oriented items followed by 168 trials with vertical items; the remaining subjects received stimuli in the reverse order. In the first experiment, a right visual-field advantage (RVF) was found for words displayed horizontally, but no visual-field asymmetries were found with vertical words. In Experiment 2, a RVF superiority was noted for the accuracy measure with horizontal displays, but no visual-field effect was found for either accuracy or response times with vertical arrays.

YOSHIZAKI, KAZUHITO, & HATTA, TAKESHI. Shift of visual field advantage by learning experience of foreign words. *Neuropsychologia*, 1987, *25*(3), 589-592.

Examines the effects of learning Hebrew words on the visual field advantage of 28 Japanese university students. Subjects who showed no visual field advantage to Hebrew words in a preliminary testing were randomly assigned to four groups: learn pronunciation only, learn meaning only, learn both pronunciation and meaning, and learn nothing. The same four Hebrew nouns employed in the first testing were shown one week later for a second testing following the learning experiment. A right visual field advantage was found for both the pronunciation only and the pronunciation and meaning group. Results were interpreted as suggesting that mastery of pronunciation seemed to be a factor in producing a shift of visual field advantage.

Bender, Bruce G.; Puck, Marcy H.; Salbenblatt, James A.; & Robinson, Arthur. Dyslexia in 47, XXY boys identified at birth. *Behavior Genetics*, May 1986, *16*, 343-354.

Focuses upon the cognitive skills of 14 unselected boys with a 47,XXY karyotype. Current ages ranged from 8 to 16 years. Included also were fourteen 46,XY control boys, matched for age and socioeconomic status. WISC-R scores were obtained on all when they were between the ages of 8 and 10. IQs for the 47,XXY subjects ranged from 71-122. Measures administered included the following: (1) Perception – *Primary Mental Abilities* Spatial Relations Test and *Developmental Test of Visual-Motor Integration; (2) Reading – Letter-Word Identification, Word Attack, and Passage Comprehension on the Woodcock-Johnson Psycho-Educational Battery*; (3) Memory – Auditory Sequential Memory from the *Illinois Test of Psycholinguistic Abilities* (ITPA) and the *Spencer Memory for Sentences*; and (4) Language – Auditory Association, Auditory Closure, and Grammatic Closure on the ITPA, *Peabody Picture Vocabulary Test*, *Boston Naming Test*, *Token Test*, and the *Goldman-Fristoe-Woodcock Test of Auditory Discrimination*. A slight, insignificant decrease in most intellectual skills and a significant deficit in reading and auditory short-term memory were found in the 47,XXY group. Seven of the 11 boys with reading problems had at least average IQs, and a language dysfunction associated with slow processing and poor short-term memory.

Share, D.L.; Chalmers, D.; Silva, P.A.: & Stewart I.A. Reading disability and middle ear disease. *Archives of Disease in Childhood*, April 1986, *61*, 400-401.

Presents data from a longitudinal study investigating the association between specific reading disability and middle ear disease. Audiological and otological data were gathered at ages 5, 7, and 9 on 962 children. Scores on the *Burt Word Reading Test* and WISC-R Performance IQ scale were obtained at ages 9 and 11. Specific reading disabled children were those whose actual reading scores minus predicted reading scores fell in the lowest 10% of the distribution (n = 49). Chi square analysis revealed no significant differences in the prevalence of middle ear abnormalities between the reading disabled group and the remainder of the sample.

Behan, Peter, & Geschwind, Norman. Dyslexia, congenital anomalies, and immune disorders: The role of the fetal environment. *Annals of the New York Academy of Sciences*, 1985, *457*, 13-18.

Reviews a series of studies, primarily done by the authors, leading to the suggestion that dyslexia is associated with congenital lesions of the cardiovascular system especially and probably of the skeletal system also. Additionally, evidence was found that mothers of dyslexic children often have immunologic abnormalities, as shown by an elevated frequency of anti-thyroid and anti-Ro antibodies. The authors note that the intrauterine environment plays a major role in many instances in determining the course of development of the nervous system and other bodily systems.

Silva, Phil A.; Hughes, Pauline; Williams, Sheila; & Faed, James M. Blood lead, intelligence, reading attainment, and behavior in eleven year old children in Dunedin, New Zealand. *Journal of Child Psychology and Psychiatry*, January 1988, 43-52.

Describes a study correlating blood lead level and intelligence, reading ability, and behavior in 579 11-year old New Zealand children. Subjects, part of an extended longitudinal study, were tested with various tasks at ages 3, 5, 7, 9, and 11. Blood was taken from each child and analyzed using graphite furnace atomic absorption spectrophotometry. Subjects took the WISC-R, omitting the comprehension and picture arrangement subtests, the *Burt Reading Test*, and their parents and teachers completed the *Rutter Parent and Teacher Behavior Questionnaires*. Two measures of inattention and hyperactivity were derived from parents' and teachers' reports. Socio-economic status, mothers' cognitive ability, mothers' depression, mothers' age, birth order, and a cumulative index of disadvantage were also gathered for each subject. No significant differences were found between the 579 and the remainder of the Dunedin study sample in intelligence, reading scores, or on the behavior questionnaires. Differences were found in blood lead. Regression analyses showed a weak relation between blood lead and social, environmental, and background measures. Multiple coefficients of social, environmental, and background measures with reading were moderately high (.65), while coefficients of these variables with intelligence, reading, and behavior were lower (.30 to .49).

IV-2 Sex differences

CAHN, LORYNNE D. Sex and grade differences and learning rate in an intensive summer reading clinic. *Psychology in the Schools*, January 1988, *25*, 84-91.

Examines how sex and grade level are related to reading achievement rates in an intensive summer clinical program. The sample consisted of 648 children from grades one through eight who attended a university clinic between 1978 and 1986. All received a series of screening and admissions tests which were used to place them in developmental or remedial groups. Achievement posttesting was conducted at the conclusion of their programs. A series of analyses of variance revealed that girls scored significantly higher than boys. Significant differences were also found among grades with reading scores increasing as a function of grade. The greatest gains in achievement were found for grades seven and eight.

CHANG, KANG-TSUNG, & ANTES, JAMES R. Sex and cultural differences in map reading. *American Cartographer*, January 1987, *14*, 29-42.

Examines sex and cultural differences in map reading skills. Subjects were 51 male and 54 female undergraduates at an American university and 50 male and 47 female undergraduates at National Taiwan University. Students answered 15 multiple-choice questions each on reference maps, topographic maps, and a street map. Males scored better than females with reference and topographic maps; sex differences in reading street maps favored males but not significantly so. Sex differences were similar in both cultural groups. Taiwan students outperformed American students in topographic map reading.

IV-3 Intellectual abilities and reading

AARON, P.G. The paradoxical relationship between intelligence and reading disability. *Perceptual and Motor Skills*, December 1985, *61*, 1251-1261.

Investigates the relations among reading ability (rate and comprehension), general intelligence, spatial ability and language comprehension for 15 college students identified as having dyslexic syndrome based on their performances on the *WAIS-R*, the *Stanford Diagnotic Reading Test*, and their spelling of words. Subjects also completed the Spatial Relations subtest of the *Differential Aptitude Tests* and the Listening Comprehension subtest of the *Durrell Analysis of Reading Difficulty* as an assessment of language comprehension. Pearson coefficients showed no variables with significant correlation with reading rate, a significant coefficient of correlation between Spatial Relations and Full Scale IQ, and negative coefficients between Full Scale IQ and listening comprehension and reading comprehension. To test the conclusion that IQ, spatial ability, and language comprehension do not explicate developmental dyslexia, a second study tested the same subjects' responses to 20 trigram nouns, 20 three letter function words, 20 pronounceable nonwords of CVC pattern, and 20 nonpronounceable CCC trigrams under timed conditions. Nouns and function words were recalled most frequently, but no differences were found between CVC and CCC recall, suggesting subjects did not apply phoneme-grapheme correspondences. Recall did not correlate significantly with IQ, but did correlate significantly with rate, leading the researcher to conclude that rate and reading comprehension are not associated with general intelligence, spatial ability, and language comprehension, and that decoding is a relatively autonomous system.

JACKSON, NANCY EWALD. Precocious reading ability: What does it mean? *Gifted Child Quarterly*, Winter 1988, *32*, 200-204.

Reviews several aspects of research dealing with precocious reading ability. While the research findings suggest that precocious reading ability is associated with general intelligence test scores, not all precocious readers have high IQs and not all children with high IQs learn to read early. In general, precocious readers will continue to do well in school. However, as a group they are so diverse and evidence regarding their later development so sparse that each child's abilities and needs should be evaluated on an individual basis.

STANOVICH, KEITH E.; NATHAN, RUTH G.; & VALA-ROSSI, MARILYN. Developmental changes in the cognitive correlates of reading ability and the developmental lag hypothesis. *Reading Research Quarterly*, Summer 1986, *21*, 267-283.

Administers a series of reading and reading related tasks to third- and fifth-grade children in investigating the cognitive correlates of reading achievement as well as the developmental lag hypothesis. Subjects included 32 third graders and 32 fifth graders, all of whom were administered the appropriate level of the Reading Survey Test of the *Metropolitan Achievement Tests* (MAT). Based on MAT scores, children were designated as skilled and less skilled readers. Additionally the *Peabody Picture Vocabulary Test* (PPVT) was given and the following tasks administered: letter-naming speed, picture-naming speed, pseudoword-naming speed, word-naming speed in neutral and related contexts, phonological oddity task, and rhyme production. For third graders, MAT scores correlated .76 with PPVT scores, -.72 with speed of word naming in related contexts, and -.53 with speed of word naming in neutral context. Neither letter- nor picture-naming times were significantly related to MAT scores. At fifth grade, MAT scores correlated significantly with every variable, correlating -.76 with pseudoword-naming time and .64 with PPVT scores. Comparison of the performance of skilled third-grade readers with less skilled fifth-grade readers indicated a significant difference on only 1 of the 13 variables.

SINCOFF, JULIE B., & STERNBERG, ROBERT J. Two faces of verbal ability. *Intelligence*, October-December 1987, *11*, 263-276.

Discusses two domains of verbal ability, verbal comprehension and verbal fluency. Verbal comprehension is usually associated with reading and listening, whereas verbal fluency is required in speaking and writing. First, the study of verbal ability was placed in historical context. Second, the three major approaches (knowledge-based, bottom-up, and top-down) to the study of verbal comprehension were defined and examples of each were presented. Third, approaches to the study of verbal fluency, which are predominantly factor-analytic, were discussed. Two specific studies that represented new approaches to the study of children's use of cognitive strategies during verbal production were presented. Fourth, the relation between verbal comprehension and verbal fluency were explored. Although the two domains are highly correlated, it was argued that they draw upon different components of information processing.

Johnston, Rhona S.; Rugg, Michael D.; & Scott, Tana. Phonological similarity effects, memory span and developmental reading disorders: The nature of the relationship. *British Journal of Psychology*, May 1987, *78*, 205-211.

Examines the performance of 8- and 11-year-old poor readers of average and below average intelligence on their recall of similar and dissimilar sounding letters. At each age level, there were two poor reader groups of 20 children each: (1) those with IQs on the *British Ability Scales* of 90 and above, and (2) those with IQs of 85 and below. Additionally, there were two control groups at each level: (3) chronological age (CA) controls, IQ 90 and above, whose reading ages were appropriate for their age; and (4) reading age controls, IQ 90 and above, who read appropriately for their CA but whose reading ages were similar to those of the two poor reader groups. Children saw strings of letters on a TV monitor and then were asked to recall them in the order presented. String lengths began with two letters and were increased by one item until two consecutive presentations were incorrectly recalled. Children received alternating trials of phonologically similar and dissimilar letters with a total of seven trials for each set. CA controls had longer spans than the other three groups. While Group 1's spans were equivalent to those of their reading age controls, Group 2 had significantly shorter spans than either Group 3 or Group 4. A correlation coefficient of .61 was obtained between reading age and memory span for children with IQs in the average range. For below average IQ readers, the coefficient between reading age and memory span was .47. Little correlation was found between memory span and IQ. Recall was better for phonologically dissimilar items.

Threadgill-Sowder, Judith; Sowder, Larry; Moyer, John C.; Moyer, Margaret B. Cognitive variables and performance on mathematical story problems. *Journal of Experimental Education*, Fall 1985, *54*, 56-62.

Explores the relation of various cognitive variables to problem-solving performance. Children from eight classrooms in grades 3 through 7 were tested for the study; numbers ranged from 157 at grade 3 to 176 at grade 7. The following measures were administered: Subtest 2 of the *Test of Reading Comprehension* (TORC); the Classifications Subtest from Scale 2 of test of "g": *Culture Fair* (CF); *Spatial Relations Test* (SRT); *Punched Holes Test* (PHT); a modified version of the *Hidden Figures Test* (HFT); and a modification of the *Find a Shape Puzzle (FASP)*. Problem solving tests were developed for each grade level in three different forms: regular verbiage, low verbiage, and drawn format. Within grades, the drawn subtest mean scores were higher than scores for the other two formats. Girls scored higher than boys on the TORC test; boys scored higher than girls on Spatial tests (SRT, PHT), cognitive restructuring tests (HFT, FASP), and problem tests. In general, story problems accompanied by a drawing tended to be most helpful to pupils scoring low on cognitive ability tests and were not detrimental to pupils scoring high on cognitive ability measures. The TORC correlated higher with problem-solving measures than did the SRT, PHT, HFT, or FASP.

Daneman, Meredyth, & Tardif, Twila. Working memory and reading skill reexamined. In Max Coltheart (Ed.) *Attention and Performance XII: The Psychology of Reading*. Hillsdale: Lawrence Erlbaum Associates, 1987, 491-508.

Asks (1) if reading is limited by the capacity of a general working memory system or a specific language-based system, and (2) what is the nature of the trade-off between processing and storage functions of working memory during reading. Subjects were 36 adults paid to participate. Administered were the following: *Nelson-Denny Reading Test*, the vocabulary portion of the *General Aptitude Test Battery*, and measures of verbal, math, and spatial working memory. For the three last measures, there was a memory-free version and a memory-loaded version. The reading comprehension and vocabulary scores were combined to give an overall verbal abilty score. Correlation coefficients obtained ranged from .62 between verbal span processes and verbal ability to -.01 between spatial span processes and verbal ability. Implications of a tripartite model of working memory are discussed.

ARMANTAGE, ARLEEN A. A comparison of the cognitive and art development of early readers of print and their yet-to-read peers: Grounds for a broad-based learning environment. In Malcolm P. Douglass (Ed.) *Claremont Reading Conference Fiftieth Yearbook*, 1986, 281-291.

Compares scores of 25 early readers and a matched group of not yet reading children on Piagetian and neo-Piagetian cognitive tasks and on two drawing measures. Children were matched for age, sex, and socioeconomic status. Reading assessment was based on several word recognition and comprehension tests. Cognitive development was assessed using Piaget's measures for conservation of number, length, continuous quantity, and substance; seriation; and class inclusion. Neo-Piagetian tasks tapped conservation of number using collections, part-whole comparisons of collections, and class inclusion. Drawings from the Harris-Goodenough *Draw-a-Man Test* and four from a reading readiness drawing measure were collected. Mean scores on both the Piagetian and neo-Piagetian tasks and on both art development measures showed no significant differences between groups. There were no significant correlation coefficients between reading scores and the other measures.

TSUSHIMA, WILLIAM T., & STODDARD, VICTORIA M. Predictive validity of a short-form WPPSI with prekindergarten children: A 3-year follow-up study. *Journal of Clinical Psychology*, May 1986, *42*, 526-527.

Evaluates the predictive validity of a short-form of the *Wechsler Preschool and Primary Scale of Intelligence* (WPPSI). Subjects were 58 preschool boys who were tested 10 months prior to entering private kindergarten. Dependent measures were school achievement tests taken 18, 30, and 42 months after the WPPSI administration, or at the end of kindergarten, first, and second grades. *Metropolitan Readiness Tests* were administered in May of kindergarten, and *Comprehensive Testing Program* tests were administered in May of grades one and two. Mean Full Scale IQ was 126.5. No significant correlation coefficients were found between WPPSI and Metropolitan results at kindergarten. Significant correlation coefficients were obtained between IQ and listening and IQ and mathematics in grade one, and between IQ and listening and IQ and writing at grade two.

CERELLA, JOHN; DICARA, RICHARD; WILLIAMS, DIANE; & BOWLES, NANCY. Relations between information processing and intelligence in elderly adults. *Intelligence*, January-March 1986, *10*, 75-91.

Administers measures of verbal intelligence, abstract reasoning, mental processing rates associated with choice reaction time, primary memory scanning, and lexical decoding to 31 college students (mean age 22 years) and 32 elderly adults (mean age 68 years). Psychometric tests were the *Raven's Progressive Matrices*; Digit Span, Digit Symbol, and Picture Completion from the *WAIS*; the *Ammons Quick Test of Vocabulary*; and the *Hooper Visual Organization Test*. Subjects were tested on two occasions, separated by one week. Group means suggested that both verbal IQ and lexical decoding processes were still strong for the elderly subjects, but there were declines in Raven's scores, in WAIS digit symbol, in picture completion, in Hooper Visual Organization, and in a variety of the choice reaction times scores. Older subjects took significantly longer for memory scanning tasks. Group results were upheld at the individual subject level for verbal domain items, but for reaction time, only intercept values correlated with abstract reasoning. No age deficits were found in short-term memory search.

IV-4 Modes of learning

Holmes, Betty C., & Allison, Roy W. The effect of four modes of reading on children's comprehension. *Reading Research and Instruction*, Fall 1985, *25*, 9-20.

Queries the effect of four modes of reading (oral reading to an audience, oral reading to oneself, silent reading, silent reading while listening) on comprehension. Additionally, the effect of mode of reading on readers of different ability and/or gender was studied. Subjects were 48 fifth graders designated as good, average, or poor readers on the basis of scores on either the *Iowa Test of Basic Skills* or the *SRA Achievement Series*. Four passages of about 600 words each were selected from a fifth-grade science text. Each passage was followed by 15 open-ended questions, equally divided among literal, inferential, and application types. Subjects read one passage in each mode, and the number of correct responses to the questions was used as the dependent measure in an analysis of variance technique. Findings suggested that comparable comprehension could be expected when pupils read orally to themselves or read silently. Good readers seemed to be negatively affected by the reading while listening task, while the average and poor readers were not. Although no one superior mode was found for poor readers, they performed better in the oral reading to an audience mode than in the silent reading mode in answering literal questions. Differences did not appear for poor readers in answering other level questions.

Ganschow, Leonore, & Weber, Donald B. Effects of mode of presentation on comprehension of below average, average and above average readers. *Perceptual and Motor Skills*, June 1987, *64*, 899-905.

Notes the effects of reading-only, listening-only, or combined reading-listening presentations on comprehension. Subjects were 100 pupils at each of grade levels 4, 5, and 6. Children were grouped according to scores on the *California Achievement Test* into below average, average, and above average readers and randomly blocked into one of the three conditions. At each grade level, a 1,500-word passage was selected from social studies texts and 25 multiple-choice questions were developed to assess comprehension of the material. Passages were presented in the appropriate condition to children in groups of four. Analysis of variance was used to evaluate comprehension scores. Both reading only and reading-listening conditions tended to be higher than listening only for all grade levels and all ability groups.

Reiff, Judith C. Student modality preference, reading achievement and reading attitude. *Reading Improvement*, Summer 1987, *24*, 107-111.

Investigates the effect on test scores and attitudes of exposing children to supplementary instruction based on modality preference. Subjects were 47 pupils in two combination fourth/fifth grade classrooms. Children were administered the *Reading Attitude Inventory* and the *Reading Style Inventory*. The latter was also filled out on each child by the teacher. One group of 24 children was designated as the treatment group and divided into groups by modality strengths. The treatment group was given daily supplemental modality instruction for 15 to 30 minutes over a six-week period. Control pupils received additional group instruction. Achievement scores from reading unit tests accompanying the basal did not differ significantly between the two groups. However, treatment pupils were more positive on 9 of 24 statements concerning attitude toward reading.

Rickheit, Gert; Strohner, Hans; Müsseler, Jochen; & Nattkemper, Dieter. Recalling oral and written discourse. *Journal of Educational Psychology*, December 1987, *79*, 438-444.

Attempts to clarify the modality effect operating in recall performance after listening and reading the same material. Subjects were 210 German-speaking business trainees, whose mean age was 19.1 years. Trainees were in programs that required either a large or small amount of written communication. Based on the program they were in and on responses to a questionnaire, subjects were assigned to either a written or a spoken communication group. Two versions of a 430-word text, one difficult and one easy, were developed. Text was presented visually in typewritten form, orally by tape, or visually one word at a time on a display screen. Thus the design included three factors: communication experience (written or spoken), presentation modality (listening, normal, or word-for-word reading), and text difficulty (easy or difficult). In addition to 12 experimental groups of 15 subjects each, there were two control groups. All answered 20 questions based on the material. Different subject groups showed a systematically different recall performance after reading or listening. No significant differences were noted for two reproduction or two inference categories of responses. This was the case for both groups of subjects. Text difficulty had no influence on either reading condition. The number of inferences increased after subjects heard the easy text.

BIALYSTOK, ELLEN, & MITTERER, JOHN. Metalinguistic differences among three kinds of readers. *Journal of Educational Psychology*, June 1987, 79, 147-153.

Identifies two types of poor readers, recoders and whole worders, and compares them with each other and with good readers on a series of metalinguistic tasks. Using the *Gates-MacGinitie Reading Tests* and teacher judgment, 20 good and 66 poor readers at grade 3 were identified. Scores on the following were used to select 20 recoders and 20 whole worders from the group of 66 poor readers: Gates-MacGinitie; Verbal Meaning subtest of the *Primary Mental Abilities Test*; and seven performance measures derived from asking children to read and spell 32 regular words, 32 frequent irregular words, and to read 32 nonwords. Nine months following standardized testing, two metalinguistic tasks were individually administered in a single 40-60 minute session: (1) Grammaticality judgment, and (2) Form-meaning judgement. On the grammaticality judgment tasks, whole worders tended to score lower than did the other two groups. Within the grammaticality tasks, there were differences in performance between whole worders and recoders. Good readers tended to outperform the two poor reader groups on the form-meaning judgment tasks. It was felt that, generally, recoders showed deficits of control of processing and whole worders showed deficits in this plus in analysis of knowledge.

HOLMES, BETTY C. Children's inferences with print and pictures. *Journal of Educational Psychology*, March 1987, 79, 14-18.

Asks whether there is a difference in the ability of skilled and less skilled upper elementary grade readers to answer inferential questions from pictures, print, and print with pictures. Subjects were 116 fifth- and sixth-grade pupils from a suburban school. Fifteen color photographs were selected from magazines, and 150-to 200-word descriptive passages were written to accompany each picture. Five inferential and two literal questions accompanied each passage. Pupils were randomly assigned to one of three blocks that varied the order of condition and three sets of pictures. Children wrote the answers to the questions while the text, picture, or both were in full view. They were also asked to write the clues that helped them answer the question. Reasons for incorrect responses to inferential questions were placed into five categories: using only one clue, free association, irrelevant information, lack of prior knowledge, and no response. Pupils performed significantly better in the pictures-only and print-with-pictures conditions than in the print-only condition. An analysis was then done using 12 skilled and 12 less skilled readers as identified by the Reading subtest of the *SRA Achievement Series*. No significant differences were found between the two groups in the pictures-only or print-with-pictures conditions. Skilled readers scored significantly better than less skilled readers in the print-only condition. The most frequent error type for both groups in all three conditions was using only one clue.

IV-5 Experiments in learning

Drum, Priscilla A. Retention of text information by grade, ability, and study. *Discourse Processes*, January-March 1985, *8*, 21-52.

Reports studies describing the recall and retention of social studies and science textbook information by 16 good and poor readers at grades 5, 8, 11, and college. Both immediate recall and one-week delayed retention were assessed. Two passages were selected at each grade level and in each content area. Passages were analyzed into propositions and hierarchical clusters in order to score number of propositions and clusters, and order of recall. Subjects read all four passages and recalled immediately. Reading times were recorded. There were no grade level or ability level differences in reading time or percentage of text propositions recalled. All subjects recalled proportionally more higher level than lower level ideas. Good readers recalled more information and retained more of the passage structure than did poor readers. Science texts were less well recalled than social studies texts. Four study conditions: no study, think, outline, and think and outline were implemented immediately after recall. Time spent studying was recorded, but no specific guidelines were given. Approximately one week later, subjects were asked to recall the previous passages. Differences in retention but not in rate were found for grade and ability levels. Studying in any condition improved retention, but older and better readers produced outlines that were more detailed and contained more inferences.

Spyridakis, Jan H., & Standal, Timothy C. Signals in expository prose: Effects on reading comprehension. *Reading Research Quarterly*, Summer 1987, *22*, 285-298.

Studies the effects of signal types (headings, previews, and logical connectives) on the comprehension of technical expository prose for 300 pre-engineering majors, all of whom were identified as competent readers on university placement tests. Four passages were prepared in seven versions, with the original passage serving as the nonsignaled version. Passages varied in structure, length, depth of information and difficulty. Subjects read one of the four passages at their own speed and then answered multiple-choice questions without looking back. Data suggested that all signal types enhanced comprehension, but significance of signals varied with the passage length, passage familiarity, and the passage difficulty. When passages were easier, or when materials were more familiar, signals were not as valuable to the reader.

Sagerman, Nancy, & Mayer, Richard E. Forward transfer of different reading strategies evoked by adjunct questions in science text. *Journal of Educational Psychology*, June 1987, *79*, 189-191.

Extends the study of the forward transfer theory of adjunct questions to the reading of science passages and different adjunct question types. The forward transfer theory proposes that the type of question asked on previous passages affects readers' attentional strategy on subsequent passages. The 72 undergraduates read four science passages ranging in length from 294 to 367 words. Subjects were assigned to either a verbatim group, conceptual group, or control group. After each of the first three passages, subjects answered verbatim, conceptual, or no questions. On the fourth passage, all subjects received both verbatim and conceptual questions. The verbatim group performed better than controls on verbatim but not on conceptual questions. The conceptual group performed better than the controls on other types of questions. The conceptual group performed better overall, with the effect strongest for conceptual questions.

Mannes, Suzanne M., & Kintsch, Walter. Knowledge organization and text organization. *Cognition and Instruction*, 1987, *4*(2), 91-115.

Reports three studies investigating the structural effects of advance organizers. In Experiment 1, 40 college students were presented with one of two kinds of outlines. The consistent outline organized the material in the same way as the text to be read later. The inconsistent outline organized the same content in a different thematic fashion. After studying the outline, each subject read a long, complex article. Dependent measures consisted of summarization, verification, cued recall, problem solving, and ranking the adequacy of possible solutions. One half of the subjects completed the tests immediately after reading, the other half took them two days later. Students receiving the consistent outline performed better on tasks reflecting mainly memory retrieval such as cued-recall, recognition, and summarization; students using the inconsistent outline performed better on inference verification and problem solving. Experiment 2 was conducted to rule out the alternative hypothesis that the form of the outline was responsible for better problem solving. Experiment 3 was conducted to demonstrate that the consistent outline did not interfere with problem solving. Both supported the findings of Experiment 1.

ALVERMANN, DONNA E. Graphic organizers: Cueing devices for comprehending and remembering main ideas. In James F. Baumann (Ed.) *Teaching Main Idea Comprehension*. Newark, DE: International Reading Association, 1986, 210-226.

Explains and recommends the use of a graphic organizer to help students see the relationships between superordinate and subordinate information in a passage. Provides a research-based rationale for the procedure, reporting studies of the researcher, as well as studies of others, to suggest the usefulness of the procedure. Three types of graphic organizer (a restructuring organizer, a lookback organizer, and an organizer plus summarizing) are explained in some detail. Two extensions, lesson organizers and thematic organizers, are also included, with less emphasis.

CHAUDHARI, U.S. Learning from text in relation to sex and socio-economic status: Effect of advance organizers. *Indian Educational Review*, January 1987, *22*(1), 110-115.

Examines the effect of advance organizers on the comprehension and retention of expository material. A group of 172 Class IX students in India were randomly assigned to one of two instructional groups. The experimental group read a series of 20 passages, each containing an advance organizer. The control group read the same material without advance organizers. Females scored significantly higher than males but no significant difference was found between socioeconomic groups.

STALLINGS, SHELLIE L., & DERRY, SHARON J. Can an advance organizer technique compensate for poor reading conditions? *Journal of Experimental Education*, Summer 1986, *54*, 217-227.

Reports two studies that examine the effectiveness of advance organizers in learning from text under less than ideal conditions. Experiment 1 used an aptitude-treatment design. College students were asked to read two types of texts. Experimental subjects received an advance organizer; controls were given a placebo. Measures of memory and inferencing ability served as aptitude indicators. The texts were presented via computer monitor at faster than normal reading speed. Cued recall and recognition tests were used as dependent measures. No significant effects were found for type of passage, treatment, or aptitude for either dependent variable. Experiment 2 employed the same materials used in the first study. A 2 x 2 factorial design was used with two levels of treatment (advance organizer vs. control) crossed with presentation condition (distracting conditions vs. no distractions). Distractions consisted of reading the text from poor quality reproductions with music playing in the background. Only one significant effect was found. Subjects in the poor reading conditions scored significantly lower regardless of whether an advance organizer was used or not.

THOMPSON, JANNY M., & MAY, RICHARD B. Summary writing and test expectancy in the cued recall of prose. *Reading-Canada-Lecture*, Summer 1987, *5*, 70-75.

Studies the test expectancy effect of summary writing with 24 undergraduates. Subjects were randomly assigned to one of four groups based on type of test expected (recall or recognition) and type of activity between study and test period (summary writing or puzzle solving). Four passages between 400-475 words in length were presented, each followed by an interpolated task and an 18-item test. The interpolated task was either to write a summary of what had been read or to solve several word puzzles. The test was either fill-in the blank or multiple-choice. Subjects were allotted 2.5 minutes for reading, 2.5 minutes for the interpolated task, and 2 minutes for the test. All four passages, tasks, and tests were done in one sitting. Half the subjects in each interpolated activity group received multiple-choice tests on the first three trials (recognition expectancy) and half received recall expectancy or fill-in the blanks. All students were given a cued recall test on the last passage. The final test was given again two weeks later. Analysis of variance of the data indicated that the summary group scored significantly higher than the other group under both testing conditions. Within the puzzle group, recall subjects performed better than multiple-choice subjects; the difference between the two summary groups was not significant. It is felt that this suggests that summary writing eliminated the superiority generally associated with recall expectancy.

HAYES, STEVEN C.; MUNT, EDWIN D.; KORN, ZAMIR; WULFERT, EDELGARD; ROSENFARB, IRWIN; & ZETTLE, ROBERT D. The effect of feedback and self-reinforcement instructions on studying performance. *Psychological Record*, Winter 1986, *36*, 27-37.

Reports two studies that examine the effect of a self-reinforcement procedure on studying performance of college students. The self-reinforcement procedure consisted of setting a goal, defining a contingency, monitoring and evaluating behavior, and delivering a consequence. In Experiment 1, three self-reinforcement instructions (none, optional, or demand) were crossed with two levels of feedback (feedback vs. no feedback). The studying task consisted of reading a series of short passages and answering six multiple-choice questions following each passage. Improvement occurred only in the two groups that received both self-reinforcement instruction and feedback, regardless of whether subjects actually set or evaluated contingencies. Experiment 2 used most of the same procedures but gave subjects the choice of three edible reinforcers and delivered them externally. Subjects receiving contingent reinforcement outperformed controls with no difference among the three edible reinforcers.

DENNER, PETER R., & RICKARDS, JOHN P. A developmental comparison of the effects of provided and generated questions on text recall. *Contemporary Educational Psychology*, April 1987, *12*, 135-146.

Compared the effects of provided versus generated questions on text recall from a developmental perspective. A 3 x 3 factorial design was used in which students from 5th, 8th, and 11th grades were assigned to one of three treatment conditions: generated questions, provided questions, or no questions. All subjects read a 10-paragraph passage that was adjusted in readability to suit the three groups. In the provided condition, a conceptual question was embedded following each paragraph; in the generated condition, students created and wrote down their own question following each paragraph; the no question group was simply asked to read the paragraphs. A cued recall test assessing both factual information and main ideas (conceptual questions) was used as a criterion measure. Time spent studying was also documented to assess efficiency. It was found that provided questions produced significantly greater recall of facts and concepts than reading only but did not differ from generated questions. Generated questions significantly increased factual recall but not conceptual recall. An analysis of the questions generated indicated that 11th graders constructed significantly more conceptual questions than their younger counterparts, suggesting greater metacognitive awareness.

Nist, Sherrie L., & Hogrebe, Mark C. The role of underlining and annotating in remembering textual information. *Reading Research and Instruction*, Fall 1987, *27*, 12-25.

Explores the importance of underlining and annotating for remembering textual information. Subjects, 67 provisionally admitted freshmen from a large southeastern university, were randomly assigned to five conditions. Four involved reading experimenter-generated underlining or underlining and annotations, where text had been marked by a panel of expert readers to indicate expert or important information and alternative information. Subjects in the fifth group were instructed to generate their own marking as they read. In session one, subjects completed a 10-item test of prior knowledge, and then read a 2,200 word excerpt from an American government text. In session two, subjects reviewed for 10 minutes, and then took a 24-item multiple-choice test over the content of the passages read, where 12 items tested expert or important information and 12 items tested alternative information. the amount of prior knowledge held was not significantly related to multiple-choice scores. A weighted means analysis of variance was significant for important and alternative marking scores, but not for total scores. Students who had the annotations did not score significantly higher than those who did not, and the mean of the group generating their own markings was not significantly different from the mean of the four experimenter-generated conditions. Subjects recalled the marked text that they had seen, important or alternative, better than unmarked text.

Draheim, Marilyn E. A study of the effects of directed reading-thinking activity and conceptual mapping on reading and writing exposition. In Malcolm P. Douglass (Ed.) *Claremont Reading Conference Fiftieth Yearbook*, 1986, 233-245.

Compares the effects on writing skills of two instructional approaches, the Directed Reading-Thinking Activity (DRTA) and conceptual mapping, with a more traditional approach to college reading and writing instruction. Subjects were 48 college freshmen enrolled in four sections of a developmental writing course. The median split on the SAT scores was used to designate half of the students as high or low reading aptitude groups. Groups were assigned to one of four treatments: conceptual mapping, DRTA, DRTA and conceptual mapping, and control. Training was given in three cycles, each covering a week. The first two cycles included two 50-minute periods of instruction and two take home essays; the third included 70 minutes of class instruction and a 50-minute period for writing an in-class essay. Final essays were coded and analyzed. The control group received the highest mean score for recall of main ideas followed by the DRTA and conceptual mapping group. Contrasts among groups on recall of high subordinate ideas and for holistic score did not reach significance. Low aptitude students in the DRTA and conceptual mapping group and in the control group recalled significantly more main ideas than did students in the other two groups. Contrasts among students in the high aptitude groups tended not to reach significance except on the holistic score where controls outperformed the conceptual mapping group.

Kiewra, Kenneth A., & Benton, Stephen L. The relationship between information-processing ability and notetaking. *Contemporary Educational Psychology*, January 1988, *13*, 33-44.

Conducts research into the relation between note-taking and various measures of academic achievement. Subjects were 32 undergraduate volunteers from an educational psychology class. Four types of information were collected: (a) score on a test of information-processing ability, (b) analyses of notes taken during a 20-minute lecture, (c) score on a test over the lecture, and (d) score on an exam covering several other lectures. In addition, grade point average (GPA) and standard scores on verbal ability from the *American College Test* (ACT ENG) and for both verbal and math ability (ACT COMP) were drawn from university records. The information processing test required subjects to reorder six 10-word scrambled sentences. Notes were scored for numbers of complex propositions, main ideas, and total words. Coefficients of correlation between the three notetaking variables and information processing ability ranged from .38 to .44; between notetaking variables and GPA, from .08 to .14; between notetaking and ACT COMP, from .19 to .24; and between notetaking and ACT ENG, from .13 to .25. Result of stepwise regression analyses indicated information-processing ability accounted for 17% of the variance in words and 18% of the variance in complex propositions.

TOBIAS, SIGMUND. Mandatory text review and interaction with student characteristics. *Journal of Educational Psychology*, June 1987, *79*, 154-161.

Compares four methods of presenting text on a microcomputer. A total of 140 high school students were randomly assigned to read a text displayed in four conditions. The Adjunct Question group had to respond to adjunct questions following every screenful of text. The Main Review group followed the same procedures as the Adjunct Question group except that they had to review preceding text and retry an adjunct question missed. The Alternate Review group followed the same procedures as the Main Review group except the text that was reread was at a lower readability level. The Reading only group read without adjunct questions but was free to select any of the options used by other groups. Pretest measures were used to collect data on student characteristics that could be used to examine aptitude treatment interactions. The posttest measure distinguished between text relevant and irrelevant information. Mandatory-review groups outperformed the others on text relevant to the adjunct questions and reviewed more sentences than did the other groups. Significant interactions among treatment, prior achievement, and anxiety were also found.

LOEWENTHAL, GLORIA G., & PONS, MANUEL M. Comparison of three methods for improving verbal analogies solution. *Forum for Reading*, Spring/Summer 1987, *18*, 53-61.

Compares the effectiveness of three approaches to teaching college students to solve verbal analogies. The 63 inner-city university freshman subjects were identified as needing remediation in reading by scores on *The Descriptive Test of Language Skills*. Intact classes in remedial reading were assigned to a control condition or to one of three treatment groups: strategy training, explanation, and discovery. Two parallel forms of an analogy test, each consisting of 10 items, were constructed to use as a pre- and posttest measure. Treatment groups were trained for about one class session and then given the posttest. Only the discovery group did not score significantly better than controls on the posttest. There was a trend for the strategy group to score higher than the other treatment groups.

WATERS, GLORIA S.; KOMODA, MELVIN K.; & ARBUCKLE, TANNIS Y. The effects of concurrent tasks on reading: Implications for phonological recoding. *Journal of Memory and Language*, February 1985, *24*, 27-45.

Summarizes three studies in which university students read and comprehended prose passages while performing concurrent interference tasks differing in stimulus type (verbal-nonverbal), response mode (articulatory-nonarticulatory), and stimulus-response congruence (transformation required-not required). Tasks were statistically equated for the amount of general processing capacity each required. In Experiment 1, subjects practiced the interference task, completed a dot detection task, and read passages while exposed to interference conditions of Tone Tracking, Digit Tracking, and shadowing. Subjects completed written recalls and a cloze test, with memory measures assessed over the cloze task. Reaction times and errors were computed into a cognitive capacity index, and reading times were calculated. Reaction times and errors varied across interference conditions, and reading times varied with passages and with interference conditions. Memory measures showed no effect of interference. Experiments 2 and 3 evaluated the effects of interference found in Experiment 1, but varied tasks and difficulty of materials. Significant effects of interference were found for reading times, content ratings, and word count in 2, and reading times and content ratings in 3. A fourth experiment tested interference with a specific phonological task. Results of 2, 3, and 4 suggested that shadowing interferes with phonological information, but not with meaning tasks. Type of processing seemed to determine whether task would interfere with reading.

YEKOVICH, FRANK R., & WALKER, CAROL H. Retrieval of scripted concepts. *Journal of Memory and Language*, October 1986, *25*, 627-644.

Reports four experiments investigating the relation between the degree of centrality of scripted concepts and the retrievability of those concepts from episodic text memory. Subjects were undergraduates enrolled in introductory psychology courses who read scripted texts in which target nouns of central or peripheral nature were only mentioned once. Immediately after text reading, subjects took a noun recognition test, indicating whether each noun appeared in the previously read text. In Experiments 1, 2, and 3, test lists contained both scripted and nonrelated nouns. Nonrelated nouns had not appeared in the text. In Experiment 4, unstudied but script relevant nouns were included in the test list. Experiments 1, 2, and 3 indicated that central concepts were recognized more rapidly than peripheral concepts. Hit rates for accuracy were high. The researchers concluded that readers make connections to their pre-experimental knowledge structures when test conditions favor adoption of scripted related criteria for judgment. Experiment 4 suggested that central concepts were retrieved more slowly than they were in 1-3, with more misses or false alarms in recognition. Central concepts were less useful when readers were required to retrieve particular scripted concepts.

O'KEEFE, ELIZABETH J., & SOLMAN, ROBERT T. The influence of illustrations on children's comprehension of written stories. *Journal of Reading Behavior*, 1987, *19*(4), 353-377.

Reports three experiments examining the recall performance of average readers in Australia under various picture-text conditions. In Experiment 1, 70 children were randomly selected from grade five classes of three urban schools; 7 boys and 7 girls were randomly placed in each of five groups all of whom read the same 470-word story. Two groups read the story illustrated with normal pictures, two groups read the story with composite pictures; one of each of these pairs saw the pictures before the text, the other saw the pictures after the text. The fifth group served as controls and read the story with no pictures. Recalls were taped and compared to the semantic and logical networks of the original. For both semantic and logical material, picture groups outperformed controls. No statistically significant differences were found favoring one experimental condition over another. In Experiment 2, performance of 48 grade three children was examined under one of three experimental conditions: (1) no pictures accompanying the text and three normal pictures either (2) preceding or (3) following the text. Children were allowed two exposures to the passage and also were asked at the end of their recall if there was anything else they could remember. None of the comparisons reached significance, although the picture groups performed better than the no-picture group. In Experiment 3, the recall of 80 randomly selected grade three children was examined under one of five conditions: no pictures, two conditions in which either three normal or three composite pictures accompanied the text, and two conditions in which either eight normal or eight composite pictures accompanied the text. Pictures were placed adjacent to the text. Two 470-word passages were used. Again, picture groups outperformed the no-picture control group. The number of pictures presented did not affect recall, nor did picture specificity.

Reid, D.J., & Beveridge, M. Effects of text illustration on children's learning of a school science topic. *British Journal of Educational Psychology*, November 1986, *56*, 294-303.

Investigates the effect of text illustrations on the learning of a science topic. Subjects were 272 children, ages 13 to 14 years old, from two British inner city comprehensive schools. A biology topic was written at two levels of readability. The easy form contained 447 words and was at readability level about age 11; the difficult form had 485 words and readability level about 17. The topic was presented in one of four forms: easy with five accompanying illustrations, easy with no pictures, hard with illustrations, and hard with no drawings. Each form was produced as a worksheet and also on a microcomputer. A 27-item criterion-referenced test was used to evaluate learning, with 9 items assessing information from illustrations only, 9 assessing text information only, and 9 testing for information presented in both picture and text. Children were divided into four ability groups for science based on a within-school examination. The test was given immediately after reading and again three months later. Results suggested there was no general motivational effect of pictures on learning text. With higher ability levels the pictures tended to be beneficial, but pictures tended to distract with less able children. Information presented in worksheet mode appeared to be learned more efficiently than on microcomputers.

Anglin, Gary J., & Stevens, J. Truman. Prose-relevant pictures and recall from science text. *Perceptual and Motor Skills*, December 1986, *63*, 1143-1148.

Designs a study to investigate the contribution of prose-relevant pictures to immediate- and delayed-recall of science text. Subjects were 42 elementary education undergraduates assigned to either a prose-plus-pictures or a prose-only condition. Each group read a prose passage on the appropriate condition and then took a 12-item multiple-choice test developed to assess recall of information in the passage and represented in the pictures. The test was readministered 28 days later. The prose-plus-pictures group scored significantly better than the prose-only group in the immediate testing condition; no significant differences were found in the delayed condition.

Anglin, Gary J. Effect of pictures on recall of written prose: How durable are picture effects? *ECT Journal*, Spring 1987, *35*, 25-30.

Investigates the durability of picture effects on recall of information presented in text. The 30 graduate students who served as subjects were assigned at random to either a prose-plus-picture group (n = 16) or a prose-only group (n = 14). Subjects read three prose passages, each followed by 10 questions. The 30 questions were given again 55 days later. Prose-plus-picture condition subjects recalled significantly more information than did the prose-only group in both immediate and delayed testing.

Koroscik, Judith S.; Desmond, Kathleen K.; & Brandon, Scott M. The effect of verbal contextual information in processing visual art. *Studies in Art Education*, Fall 1985, *27*, 12-23.

Asks whether higher retention results when verbal contextual information is presented with a work of art. Subjects were 80 university students, 40 of whom were elementary education majors with no formal training in the visual arts and 40 of whom had college level training in the history of criticism of photographic art and in studio production work. Visual art stimuli consisted of 12 photographs and 12 drawings, with each type represented by an equal number of low, medium, and high levels of abstraction. Subjects were assigned randomly to four title context conditions: (1) correct title context (CTC), (2) erroneous title context (ETC), (3) generate title context (GTC), and (4) no title context (NTC). Subjects examined an artwork for one minute, were given an interpolated task, and then completed structural recognition, structural recall, and semantic retention tests, in that order. Verbal contextual information affected both groups' performance on semantic retention tests. The CTC condition aided the formation and retention of accurate recall, while the ETC condition misled subjects into remembering meanings that had little to do with what was actually pictured. Meanings were more accessible for processing when responding to photographs as opposed to drawings, but the accuracy of interpretation was determined by the abstraction level and by the type of contextual information given.

Scruggs, Thomas E.; Mastropieri, Margo A.; McLoone, Barbara B.; Levin, Joel R.; & Morrison, Charles R. Mnemonic facilation of learning disabled students' memory for expository prose. *Journal of Educational Psychology*, March 1987, *79*, 27-34.

Asks whether mnemonic illustrations improve the recall of passages by learning disabled (LD) adolescents. Subjects were 24 LD students in grades 10, 11, and 12. Students were randomly assigned to either the control or mnemonic condition and read passages incorporating either mnemonic or nonmnemonic illustrations. Two experiments are presented. In Experiment 1, subjects were instructed to remember attribute dichotomies of the North American minerals discussed in the text; in Experiment 2, they were to remember specific attribute qualities of the minerals. A posttest followed the reading. Students learned significantly more in both experiments with mnemonic pictures, both on immediate posttests and following a one-week delay. Experiment 2 findings also indicated that mnemonic instruction aided students' ability to make correct inferences about attribute dichotomies.

Tajika, Hidetsugu; Taniguchi, Atsushi; Yamamoto, Katsuhito; & Mayer, Richard E. Effects of pictorial advance organizers on passage retention. *Contemporary Educational Psychology*, April 1988, *13*, 133-139.

Investigates the effects of pictorial advance organizers on retention of information by 48 Japanese fifth-graders. Children participated in groups of 12 in each of four between-subjects treatment groups: integrated pictorial advance organizer, fragmented pictorial advance organizer, extra reading time, and control. Materials consisted of a 550-word passage. Children in the two advance organizer conditions were presented with their respective pictorial organizers to study for two minutes and the extra time group was given two extra minutes to study the passage. Then all pupils received the passage to read as they listened to it played twice on a cassette tape player. This was followed by an additional two minutes allowed for reading and studying. An immediate and a one-week delayed free recall test were given. Children in the integrated pictorial advance organizer group outperformed each of the other two groups on both tests ($p < .05$). No other comparisons reached significance.

Yussen, Steven; Huang, Shih-Tseng; Mathews, Samuel; & Evans, Robert. The robustness and temporal course of the story schema's influence on recall. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, January 1988, *14*, 173-179.

Conducts three experiments investigating the influence of story schema on recall of simple stories. Subjects were students enrolled in educational psychology classes and numbered 40, 40, and 55, respectively, in the three experiments. In Experiment 1, three simple stories in three versions, one standard and two scrambled, were read. There were four groups of subjects and treatments: (1) exact recall/standard, (2) exact recall/scrambled, (3) make a story/standard, and (4) make a story/scrambled. The make a story groups were asked to recall the story in a form such that it would make sense. Subjects read all stories, completed an interpolated task, and then wrote their free recalls. When recalling a scrambled story, both free recall and the concordance of that recall with the order of an ideal story were depressed. When instructed to make a story, both the amount of free recall and its concordance with an ideal story structure were increased. In Experiment 2, subjects were to recall specific story information in which retrieval cues in the form of a cloze test were given or to briefly summarize the main points of each story. For both the cloze procedure recall and the summary construction, the scrambled stories impaired recall. Experiment 3 replicated Experiment 1 and extended it by asking for subjects to recall one story immediately, a second story after a 15-minute delay, and a third story after a 24-hour delay. Results were similar to those of Experiment 1 even over the longer time period.

Reed, Stephen K. A structure-mapping model for word problems. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, January 1987, *13*, 124-139.

Interprets the results of four experiments on word problems through a structure-mapping model. Subjects were university students. Experiments 1 and 2 examine student awareness of mixture problems and work problems. Problems were equivalent (same story, same procedures), similar (same story, different procedures), isomorphic (different story, same procedures), or unrelated (different story, different procedures). Experiment 3 used an example solution for work problems and mixture problems to generate equations to related problems that differed in their mappings from the given examples. Experiment 4 matched concept in the test problems to corresponding concepts in the examples, providing a direct measure of students' ability to construct maps across different problem types. In Experiment 1, formal relations among the problems had little influence on student rating of problem solution usefulness. In Experiment 2, students were more sensitive to the formal structure of the problems, and could distinguish among problems and recognize relationships. In Experiments 3 and 4, subjects performed better on isomorphic problems than on similar problems, and better on work isomorphs than on mixture isomorphs. Results suggested the utility of structure-mapping models for predicting solutions to word problems.

O'Brien, David G., & Martin, Michael A. Does figurative language present a unique comprehension problem? *Journal of Reading Behavior*, 1988, *20*(1), 63-87.

Explores aspects of comprehension thought to be unique to the understanding of figurative passages. Fifty college students were pretested on general vocabulary knowledge and inferencing ability before being asked to read three passages. The first passage was a literal comparison passage and the second and third passages were figurative comparison passages created by substituting figurative expressions for literal expressions. Following the reading, subjects wrote interpretations of the passages and completed an attribute-listing task. A subsample of subjects participated in interviews aimed at revealing their perceptions of the passages and strategies they used. Results of the quantitative analyses revealed that general vocabulary knowledge was the only stable predictor of performance on both figurative texts; however, knowledge of specific attributes of terms predicted performance for one of the figurative passages. Overall, the quantitative results did not support the uniqueness of figurative comprehension. However, qualitative results obtained from the interviews indicated that many subjects were employing figurative unique abilities that have been reported in the literature.

Rook, Karen S. Effects of case history versus abstract information on health attitudes and behaviors. *Journal of Applied Social Psychology*, June 1987, *17*, 533-553.

Reports three studies that compare the effectiveness of health information presented in case history form with equivalent information presented in abstract form. In Study 1, a sample of undergraduate students read information on the topic of generic drugs presented as either a case history or in absract form. Post-reading scales assessed the students' attitudes, behavioral intentions, and affective reactions. Results found the case history to be significantly more persuasive; however, it did not elicit significantly greater affect, concern, or optimism. Study 2 followed similar procedures but included only adult women who read about the topic of osteoporosis. Results were consistent with those of Study 1 except that the case study also elicited significantly greater optimism. Study 3 used nearly the same procedures as Study 2 but focused on women ages 55 to 79 who were at high personal risk for osteoporosis. A follow-up questionnaire was distributed six weeks later. Contrary to Studies 1 and 2, no significant differences were found between the two methods of presentation. However, a subsequent analysis showed a significant interaction between concern and method of presentation. The results of the six-week follow-up found a marginal effect in favor of the case study on the long-term recall of information.

HERTEL, PAULA T. Isolation and adaptation in passage memory. *Discourse Processes*, January-March 1985, *8*, 75-90.

Utilizes two experiments in examining the notions of isolation and adaptation. Isolation occurs when memory for the contents of a passage resists retroactive interference from unrelated materials. Adaptation is said to occur when memory for the contents of a passage is subject to retroactive interference from thematically related materials. In both experiments, subjects were 192 volunteers from introductory psychology classes. In Experiment 1, subjects read either a prose passage or a list of sentences that lacked passage structure. They then rated similarities within a list of unconnected phrases. The phrases were not meaningfully related to the theme of the prose passage, but they contained information which was conceptually similar to both types of previous sentences. In a subsequent forced-choice recognition task, the interpolated phrases reliably influenced recognition of unstructured sentences only. In Experiment 2, instructions and materials for the interpolated task varied along a dimension of relevance to the theme of the passage. For the nonthematic condition, instructions and phrases were identical to those in Experiment 1. In the thematic condition, subjects were to relate each phrase pair to the passage and to judge the degree of similarity between the phrase pair and a previous passage sentence. Phrases included concepts that defined the passage theme. Only theme related phrases led to interference in passage recognition.

MOORE, PHILLIP J. Reciprocal teaching and reading comprehension: A review. *Journal of Research in Reading*, February 1988, *11*, 3-14.

Describes the theoretical assumptions underlying reciprocal teaching and reviews the research examining its use. The theoretical elements of reciprocal teaching are scaffolding, fading of the expert's role, active student involvement, and the provision of feedback. Instructional research that assessed the effectiveness of reciprocal teaching was reviewed in terms of strategy effect, teacher effects, and the types of students that benefit from this approach.

REEDER, GLENN D.; MCCORMICK, CHRISTINE B.; & ESSELMAN, EDWARD D. Self-referent processing and recall of prose. *Journal of Educational Psychology*, November 1987, *79*, 243-248.

Utilizes two experiments in investigating and comparing the effect of self-reference and other conditions upon recall of prose information. Subjects were 64 and 96 undergraduate student volunteers enrolled in introductory psychology classes. In Experiment 1, each student read four descriptive prose passages of about 100 words in length under one of four processing conditions: (a) self-reference, (b) other-reference, (c) linguistic, and (d) control. After reading all passages three times, subjects received a surprise free-recall test. Protocols were scored for idea units recalled. The highest mean proportion of recall occurred in the self-reference condition, followed by the other-reference, control, and linguistic (looking for misspelled words) conditions. In Experiment 2, subjects read only one passage. Self-reference again produced the highest level of recall.

PEDERSEN, JON; BONNSTETTER, RONALD J.; CORKILL, ALICE J.; & GLOVER, JOHN

A. Learning chemistry from text: The effect of decision making. *Journal of Research in Science Teaching*, January 1988, *25*, 15-21.

Presents two experiments investigating whether requiring students to make decisions about chemistry text content results in superior recall over having students answer equivalent questions that do not require a decision. The two experiments are identical except that Experiment 1 assessed immediate recall and Experiment 2 used a measure of long term recall. In Experiment 1, 59 high school chemistry students were randomly assigned to read a 2600-word essay in one of four conditions: (1) decision questions, (2) statements providing the decision information, (3) content questions not requiring decisions, and (4) control. Written free-recall protocols were scored for the number of text propositions appearing. Significantly more propositions were recalled by subjects in the decisions condition than by students in any of the other conditions. Students in the content questions condition recalled significantly more propositions than did students in the statements or control conditions. For experiment 2, 45 student volunteers were subjects and recall was assessed one week after reading. Results verified those of Experiment 1.

GLOVER, JOHN A., & CORKILL, ALICE J. Influence of paraphrased repetitions on the spacing effect. *Journal of Educational Psychology*, June 1987, *79*, 198-199.

Designs two experiments to study the effect of spaced versus mass repetition on recall. Subjects were 64 and 60 undergraduates in Experiments 1 and 2, respectively. In Experiment 1, subjects read a 99-word paragraph and its 91-word paraphrased version. In Experiment 2, a 125-word tape recorded lecture and its paraphrased version were listened to. Spacing of learning trials (massed vs. spaced) and type of repetition (verbatim vs. paraphrased) were independent variables. Subjects were assigned randomly to four conditions: massed verbatim repetitions (MVR), massed paraphrased repetitions (MPR), spaced verbatim repetitions (SVR), and spaced paraphrased repetitions (SPR). Subjects in MVR and MPR conditions read the paragraph in Experiment 1 immediately followed by a reading either in verbatim or paraphrased form. In SVR and SPR conditions, the second reading occurred 30 minutes after the first reading. Protocols were scored for propositions recalled. In Experiment 1, MVR subjects recalled less than did SVR subjects; MPR subjects recalled as much as did SPR subjects. Recall of information in massed paraphrased repetitions was significantly greater than recall in massed verbatim repetitions. Experiment 2 yielded similar results.

GOETZ, ERNEST T.; ALEXANDER, PATRICIA; & BURNS, CHRISTINE W. Elaborative strategies: Promises and dilemmas for instruction in large college classes. *Reading Research and Instruction*, Winter 1988, *27*(2), 62-69.

Examines selected research on elaborative strategies and describes briefly a preliminary study of generative activities in an undergraduate educational psychology class of 70 students. Student evaluations of the attempt revealed that 46% felt it facilitated learning, 42% felt that it had no effect, and 12% felt it interfered.

HAYES, DAVID A. The potential for directing study in combined reading and writing activity. *Journal of Reading Behavior*, 1987, *19*(4), 333-352.

Examines how selected writing tasks that accompany reading influence the quality of inferences students make in recalling a text. A sample of 176 tenth-grade students were assigned to one of four treatment conditions: (1) writing paraphrases; (2) writing questions; (3) writing compare-contrast statements; and (4) completing matching exercises, a control condition. All subjects read the same initial passage, completed a pretest written recall, worked their respective instructional writing tasks, and completed a posttest written recall. Pre- and post-recalls were scored through propositional analysis with text reproduction, generalization, deletion, integration, and construction serving as dependent variables. No significant differences were found among treatment groups in text reproduction, deletion, and generalization. However, on integration, the question-writing group produced significantly more superordinate information. For the dependent variable of construction, the compare-contrast and question-writing groups generated more new information than the other treatment groups.

Recht, Donna R., & Leslie, Lauren. Effect of prior knowledge on good and poor readers' memory of text. *Journal of Educational Psychology*, March 1988, *80*, 16-20.

Studies how prior knowledge influences the amount of short-term nonverbal and verbal memory and long-term retention in pupils who were high and low in reading comprehension. Participants were 32 seventh- and 32 eighth-grade pupils. High and low ability readers were determined by scores on the Science Research Associates reading comprehension subtest. Pupils were given a baseball knowledge pretest to determine high or low background knowledge. Thus there were four groups of children: high ability/high knowledge (10 boys, 6 girls), high ability/low knowledge (3 boys, 13 girls), low ability/high knowledge (12 boys, 4 girls), and low ability/low knowledge (7 boys, 9 girls). Children were asked to read a 625-word story about a baseball game. The story was read in five parts. After each part, subjects were shown a replica of a baseball field with wooden players and were asked to move the figures to reenact the action of the story. They were also to verbally describe what happened. Finally, pupils were asked to summarize the story and to sort 22 sentences, randomly selected from the passage, on the basis of importance of ideas to the text. Both quantitative and qualitative analyses were made. On all measures, children with greater knowledge of baseball recalled more than did children with less knowledge. No interactions between prior knowledge and ability were found.

van Dam, Gerrit; Brinkerink-Carlier, Michele; & Kok, Ineke. Influence of prompting on free recall of a text. *American Journal of Psychology*, Winter 1986, *99*, 487-496.

Reports two studies assessing the effects of retrieval cues and verbal embellishment on the free recall of text. In Experiment 1, a sample of undergraduate students read an expository text and then were asked to orally reproduce its contents. Subjects received either retrieval cues for all paragraphs of the text, some of the paragraphs, or none of the paragraphs. Prompting did not significantly influence the total number of paragraphs reproduced. However, there was evidence that increased recall for the prompted paragraphs was accompanied by decreased recall for the nonprompted passages. Experiment 2 studied the combined effects of retrieval cues and verbal embellishment. Retrieval cues, similar to those used in the first experiment were matched with either embellished or nonembellished paragraphs in an expository text. The total number of paragraphs recalled were about equal for the two conditions. However, embellished paragraphs were recalled more frequently than nonembellished paragraphs. A significant interaction between retrieval cues and embellishment suggested that the effects of embellishment and prompting counterbalanced one another almost completely for some subsets of paragraphs.

Morrison, Charles R., & Levin, Joel R. Degree of mnemonic support and students' acquisition of science facts. *ECT Journal*, Summer 1987, *35*, 67-74.

Compares the effects of mnemonic techniques on remembering information acquired from expository text. A sample of 85 eighth-grade pupils was randomly assigned to one of four treatment conditions. One group (Illustration) was provided with keywords and appropriate illustrations, a second group (Imagery) was given keywords along with instructions for creating their own interactive images, the third group (Unstructured) was given instructions for creating both their own keywords and interactive images, and the fourth group (Control) was instructed to use their own best study method. All students were instructed to read independently a 1726-word science passage that presented dichotomized attributes for nine minerals. An attribute-identification test and recall task were administered immediately after reading the text and eight days later. The Illustration condition was superior to the other treatments on both the immediate and delayed attribute-identification task and recall measure.

Armstrong, Penny, & McDaniel, Ernest. Relationships between learning styles and performance on problem-solving tasks. *Psychological Reports*, December 1986, *59*, 1135-1138.

Studies problem-solving behaviors and learning styles for 11 graduate student volunteers working a computerized problem-solving task. Subjects made choices during the simulation and wrote their reasons for each decision. Time to read relevant information and time to make decisions were recorded by the computer clock. Responses were scored for information used and for number of wrong choices. Subjects also completed the *Inventory of Learning Processes*, assessing deep processing, shallow processing, elaborative processing, serialist processing, self-efficacy, and holistic processing. Pearson intercorrelation coefficients were computed among all variables. The correlation coefficient between reading time and decision time was .95 ($p < .001$). Reading time and decision time both resulted in a significant negative coefficient with number of trials in problem solving, suggesting that subjects who took more time for reading and making decisions made fewer wrong choices. Those who obtained high scores for deep processing made fewer wrong choices on information. Self-efficacy correlated significantly with reading time and decision time. The authors conclude that subjects who perceive themselves as competent learners take more time, use more information, and make fewer wrong choices in a problem-solving situation.

Alexander, Patricia A. College students' use of task-related information during studying. *Reading Research and Instruction*, Winter 1986, *25*, 91-101.

Explores the effects of specific task-related information on 40 undergraduates' study and question-answering behaviors. Subjects studied and were subsequently tested on a 4000-word article, with attached prereading directions. Subjects were randomly assigned to four treatment groups: 1) specific directions, specific criteria; 2) specific directions, no criteria; 3) general directions, specific criteria; and 4) general directions, no criteria. After text was studied and removed, students answered four questions. Question 1 was a restatement of specific prereading directions; question 2 assessed the indirect effect of specific prereading directions; question 3 required speculation about a character; and question 4 assessed incidental learning. Students recorded strategies they employed when studying the text. They also had the option to answer again any or all questions on the question sheet, this time with the text present. Results of the MANOVA demonstrated no statistically significant effect for directions, but significant effects were found for specific response criteria, especially for questions 1 and 2. The majority of students used text-driven strategies, particularly underlining. Specific direction subjects were more likely to employ schema-driven strategies than were general direction students. A statistically significant direction by effort effect was found, as 17 of the specific direction students selected the option of answering the questions a second time.

Dreher, Mariam Jean. Spontaneous instantiation of general terms. In Harry Singer & Robert B. Ruddell (Eds.) *Theoretical Models and Processes of Reading*. Newark, DE: International Reading Association, 1985, 426-433.

Tests the validity of the developmental trajectory hypothesis by examining three conditions which might affect instantiation in children. The hypothesis states that intermediate grade children are at a point on a developmental trajectory between no spontaneous instantiation and the spontaneous instantiation found at college level. Two experiments are reported, the first with 46 fifth graders and 47 sixth graders and the second with 60 fifth graders. In both experiments, total reading scores on the *Comprehensive Test of Basic Skills* and teacher verification were used to select good and poor readers. Materials consisted of 12 sets of three related sentences, with each set containing target, control, and exemplar sentences. Equal numbers of good and poor readers at each grade level were assigned to one of four groups. In Experiment 1, all groups were to learn the three types of sentences and received two types of recall cues, particular and general. Groups differed on the directions received before the task and in the length of the list of sentences. Neither list length nor type of directions affected the results, so in Experiment 2 subjects in both conditions received the regular list length and directions to concentrate on meaning. Results indicated in both experiments that spontaneous instantiation occurs in children.

WEST, RICHARD F., & STANOVICH, KEITH E. How much of sentence priming is word priming? *Bulletin of the Psychonomic Society*, January 1988, *26*, 1-4.

Conducts three experiments in which sentence primes were compared with two-word primes under different conditions of context presentation. Subjects in all three experiments were undergraduates (n = 80, 32, 80) enrolled in introductory psychology classes. Differences among experiments were primarily in the methods of presenting the stimuli. In Experiment 1, stimuli in the sentence prime condition consisted of 96 pairs of sentences differing only in their final word. Two-word prime condition stimuli consisted of the two main content words of the sentence context; neutral two-word prime consisted of the words, "they said." Subjects read aloud the primes as they appeared on a CRT monitor; in addition they were to read aloud the target word as rapidly as possible. Stimuli, apparatus, and procedures were the same in the other two experiments except that target-word onset was under the control of the computer in Experiment 2 and primes were presented sequentially from left to right across the CRT in Experiment 3. Smaller priming effects were found in the two-word condition in all three experiments. However, a large proportion of the context effect observed from sentence primes was attributable to priming arising from the major content words of the sentence.

LA HEIJ, WIDO, & VERMEIJ, MARJOLEIN. Reading versus naming: The effect of target set size on contextual interference and facilitation. *Perception & Psychophysics*, April 1987, *41*, 355-366.

Cites two experiments investigating the differential effects of target set size in reading and naming tasks. In Experiment 1, a letter-naming task was used; in Experiment 2, a picture-naming task. In each, 12 university students in the Netherlands were paid to serve as subjects. Four distractor conditions were used: incongruent, neutral, control, and congruent. Apart from the differential effects of set size on overall mean reaction time, the reading and naming tasks showed similar results. With increasing target set size, interference due to an incongruent distractor decreased and facilitation due to a congruent distractor increased. This interference-facilitation tradeoff was found regardless of whether the neutral condition or the control condition was used as a baseline. Presented is a logogen model that accounts for the changes in context effects in terms of differences in criterion level and rate of accumulation of activation.

SHAUGHNESSY, MICHAEL F.; DIVINE, KATHERINE; & ROCHE, KATHLEEN. Levels of processing: Effects of interference in word learning over time. *Psychological Reports*, April 1987, *60*, 551-554.

Conducts an experiment to ascertain the effects of proactive and retroactive interference in immediate, intermediate, and long-term recall. Subjects were 121 undergraduates in a psychology class. Ten minutes were allowed for students to learn 20 words with definitions; these acted as proactive interference in learning 20 words in three different conditions: keyword, write in a sentence, or control. One-third of subjects were in each condition. Following this, 20 new words with definitions were given to be learned in 10 minutes; these words provided retroactive interference. Subjects then were given a multiple-choice test over all 60 words immediately after, one month later, and two months later. Both the proactive and retroactive interference groups did better than the treatment conditions. None of the proactive, retroactive, or treatment conditions showed significantly more words recalled.

SIU, PING KEE. Understanding Chinese prose: Effects of number of ideas, metaphor, and advance organizer on comprehension. *Journal of Educational Psychology*, December 1986, *78*, 417-423.

Examines the effects of number of ideas, metaphors, and advance organizers on the comprehension of Chinese text. Participants included 485 seventh-grade and 514 tenth-grade Chinese students from seven coeducational schools in Kowloon, Hong Kong. At each grade level, four expository passages were selected from textbooks. Each passage contained 550 to 650 Chinese characters; each was divided into 30 to 35 macropropositions which were converted into 6 to 9 episodic ideas. The original text was termed the more-ideas version; a fewer-ideas version was developed by deleting one-third of the noncoherent macropropositions from the original text, but with coherent macropropositions unchanged and propositions repeated to keep the text comparable in length to the original. A metaphoric version was developed by replacing thematic statements in each episode with metaphoric sentences. An advance organizer was constructed for each text. Either a linear version or an advance organizer version was given to subjects. Subjects were randomly assigned to eight groups. Subjects were required to take a reading comprehension test consisting of three prose passages and 18 items, then to read four texts of the same version and order the thematic statements as they appeared in the text. When texts with more and fewer ideas were compared, results favored the latter. Replacement of literal expressions with metaphoric ones did not influence idea organization. Text with an advance organizer resulted in distracting effects for both poor and good readers.

EUBANKS, AUDREY C., & FERGUSON, WILLIAM F. Hispanic ESL students and the learning of nouns under three treatment conditions. *Reading Improvement*, Summer 1987, *24*, 121-125.

Studies the efficacy of three techniques in teaching English nouns to university students who were enrolled in beginning level English classes in an English Language Institute. A total of 90 students from Central and South America were randomly selected and assigned to three treatment groups: presenting words only, presenting words in conjunction with pictures, and presenting words in sentence context. Subjects were individually shown eight nouns one at a time in the appropriate treatment condition. Words were shown until all eight were correctly pronounced in two consecutive trials. Retention was tested 24 hours later. The use of pictures facilitated identification initially. However, results for 24 hour retention indicated the best conditions in order were word in sentence, word in isolation, and word with a picture.

ROYER, JAMES M.; ABRANOVIC, WYNN A.; & SINATRA, GALE M. Using entering reading comprehension performance as a predictor of performance in college classes. *Journal of Educational Psychology*, March 1987, *79*, 19-26.

Designs a study to discover if a comprehension test based on course-relevant material is predictive of performance in that course. Subjects were undergraduate volunteers, mostly juniors and seniors, 91 of whom were enrolled in an educational psychology class and 93 enrolled in a business statistics course. For each course, four passages were selected from the text and revised so that each was 12 sentences long. The Sentence Verification Technique (SVT) was then used in preparing a test over each passage. Two sets of four passages each were constructed, with each set containing two psychology and two statistics passages. SVT tests were administered on the first day of class. Examination grades, overall GPA, and SAT Verbal and Mathematics scores were obtained. Regression analyses were performed with examination performance and GPA as criterion variables and relevant SVT performance, irrelevant SVT performance and SAT scores as predictor variables. The proportion of variance in examination performance accounted for by SVT performance was 11.7%, while SAT scores accounted for 9.3% of the variance in examination performance. Relevant SVT performance was unrelated to GPA.

SINGER, HARRY. An instructional model for reading and learning from text in a classroom setting. *Journal of Reading Education*, Fall 1987, *13*(1), 8-24.

Questions the psychological model as an adequate explanation of the reading process and suggests the need to include the instructor as a variable in any model adequately describing reading and learning from text in a classroom setting. The instructor influences and is influenced by the text, the reader's resources, the reader's goals, and the setting. Selected studies are reviewed to develop the premise of the importance of the instructor's role in any fully-developed model.

IV-6 Auditory perception

CASTRO, SÃO LUIS, & MORAIS, JOSÉ. Ear differences in illiterates. *Neuropsychologia*, 1987, *25*(2), 409-417.

Uses a dichotic listening technique to study the influence of literacy on direction and magnitude of ear asymmetry. Subjects were 22 illiterate, 20 semiliterate, and 32 literate Portuguese females, ages 37 to 66, who were individually tested first with a monaural test and then a dichotic one. The subjects were presented 72 pairs of CVCV Portuguese words on a tape recorder. The words differed either in the initial consonant only, a plosive, or in at least the first three phones. A right ear advantage was found for all groups. The advantage was approximately of the same magnitude for the dissimilar word pairs; for the similar word pairs, the laterality index was greater in the literate group. Analysis of individual data indicated that this difference was related to differences in performance level. When subgroups of similar performance level were compared, there were no differences in right ear advantage as a function of literacy.

CONTENT, ALAIN; KOLINSKY, RÉGINE; MORAIS, JOSÉ; & BERTELSON, PAUL. Phonetic segmentation in prereaders: Effect of corrective information. *Journal of Experimental Child Psychology*, August 1986, *42*, 49-72.

Checks whether young children can learn explicit phonetic segmentation in three experiments. Children were four- and five-year olds from kindergartens in Brussels; all were native speakers of French. In Experiment 1, 20 matched pairs were assigned to either an experimental or control group and were induced through examples to delete the initial vowel in a VCV or VCVC utterance and the initial consonant in a CVC syllable. Experimentals were given corrective feedback through the tasks, while controls received no feedback after the first block of trials. Improvements were found in five-year olds under corrective feedback. Four-year olds did not demonstrate a similar effect of feedback on the average. However, when tested again in Experiment 2 with a free segmentation procedure, the majority were capable of decomposing CVC syllables into smaller units and also displayed significant transfer from the previous experiment. In Experiment 3, 18 children from kindergartens for four-year olds and 18 from kindergartens for five-year olds were tested for either initial or final consonant deletion with immediate feedback. Improvements occurred at both ages for both manipulations, although performance on initial consonant deletion was poorer than on final consonant deletion.

Grogan, Sarah. Hemispheric lateralisation for verbal analysis: Do children with reading problems differ from controls? *Perceptual and Motor Skills*, December 1986, *63*, 1265-1266.

Compares four groups of children, ages 12 to 13, on a dichotic digits task: 45 right-handed children classified as dyslexic; 21 right-handed children similar in age and reading retardation to the dyslexics, but who were receiving no special reading instruction; and two control groups (n = 20, 21) who were matched for sex, age, nonverbal IQ, handedness, and socioeconomic status with the two groups of poor readers. Children listened to sets of digits on each channel of a stereotape. Mean number of digits correctly recalled from each ear was obtained. Control group children recalled more digits in total than did either the dyslexic or poor reader groups. Both poor readers and dyslexics showed similar degrees of right-ear advantage as did matched controls.

IV-7 Visual perception

Greenberg, Seth N., & Vellutino, Frank R. Evidence for processing of constituent single- and multiletter codes: Support for multilevel coding in word perception. *Memory & Cognition*, January 1988, *16*, 54-63.

Presents two experiments evaluating whether constituent units at different levels of processing are activated during word recognition. Subjects for both experiments were undergraduate volunteers, numbering 24 and 20. The major purpose of Experiment 1 was to determine whether perception of a word's component letters presented as targets would be facilitated by brief visual exposure to the word presented as a prime. Subjects saw a word, random string, or neutral prime on a screen for 150 msec, and then either a target letter or a foil was displayed. Subjects were to respond as quickly as possible whether or not a target was present. The results were interpreted as suggesting that letter codes are activated when words and other types of letter strings are processed. Further, it appeared that initial letters may have been more strongly activated than final letters. In Experiment 2, high- and low-frequency bigrams were targets. Those appearing in word primes were found to have a processing advantage over bigram targets not appearing in word primes. Single-letter constituents in low-frequency bigrams also benefited from priming, but single-letters in high-frequency bigrams did not benefit from priming. Results were interpreted as suggesting that both single- and multiletter constituents are available during word processing, and thus support multicomponent models of word perception.

Duncan, John. Attention and reading: Wholes and parts in shape recognition—A tutorial review. In Max Coltheart (Ed.) *Attention and Performance XII: The Psychology of Reading*. Hillsdale: Lawrence Erlbaum Associates, 1987, 39-61.

Presents six experiments all investigating the role of attention in letter and word recognition, and particularly with feature integration theory. Subjects appear to be adults in all experiments and numbered between 4 and 16. In Experiments 1 and 2, a central digit and a peripheral letter pair (Experiment 1) or word pair (Experiment 2) were displayed. Subjects were to indicate whether either of two target letters or words or no target had appeared in the periphery. Across object conjunction errors (reports of the correct stimulus parts in the incorrect combinations) were common for words, but almost nonexistent for letters. Subjects in Experiment 3 searched letter displays for target L or V. There were eight tasks, each with two forms. Experiments 3a and 3b were similar except that the target letter was always L. Results offered little support for the feature integration theory. Experiment 4 studied word search under conditions comparable to Experiment 3. Experiments 5 and 6 sought to demonstrate priming effects under circumstances when, through inattention, forced-choice prime recognition was at chance. Priming depended more upon the stimulus parts in a display than upon their conjunctions. Incongruent strokes or letters were harmful whether or not they were all contained in the same object and whether or not in total they could combine to form a whole target. Problems with feature integration theory are discussed and alternative proposals briefly considered.

FISHER, CELIA B.; BORNSTEIN, MARC H.; GROSS, CHARLES G. Left-right coding and skills related to beginning reading. *Journal of Developmental and Behavioral Pediatrics*, October 1985, *6*, 279-283.

Reexamines the relation between visual-spatial abilities associated with left-right coding and reading-related skills. Tested were 50 kindergarten and 50 first-grade children, all of normal intelligence as determined by the WPPSI or WISC-R. Children's reading ability was assessed by the *Gates-MacGinitie Readiness Skills Test* in kindergarten and the *Iowa Test of Basic Skills* Primary Battery in grade one. Additionally, each child was asked to write 12 lower-case letters from dictation, and left-right visual skills were checked in a two-choice delayed matching-to-sample paradigm. Performance on the left-right visual task correlated with reading performance in both kindergarten (r = .36) and first grade (r = .43) as well as with letter-reversal errors (r = .42) in kindergarten. Letter-reversal was not strongly related to left-right visual skills (r = .24) or to reading scores (r = .24) in first grade. The data are viewed in the context of a deficit in left-right coding.

SOLAN, HAROLD A. Perceptual norms in grades 4 and 5: A preliminary report. *Journal of the American Optometric Association*, December 1987, *58*, 979-982.

Reports normative data for 38 fourth- and fifth-grade normal children on three perceptual tasks: tachistoscope, 5 digits at .1 and .01 seconds; grooved pegboard, dominant hand; and auditory-visual integration test (AVIT). Perceptual tasks were correlated with scores on the vocabulary and comprehension subtests of the *Gates-MacGinitie Reading Tests*, Form D, and with arithmetic scores on the *Wide Range Achievement Test* and the arithmetic subtest of the WISC-R. Correlation coefficients between Gates comprehension scores and the two timed tachiscope scores were .345 at .1 sec and .382 at .01 sec. A coefficient of .431 was found between comprehension scores and AVIT scores, while the coefficient for the grooved pegboard and comprehension was nonsignificant. Lower coefficients were reported with the vocabulary scores on the Gates.

ORMROD, JEANNE ELLIS. Differences between good and poor spellers in reading style and short-term memory. *Visible Language*, Autumn 1986, *20*, 437-447.

Designs four experiments to explore the differences between good and poor spellers in reading style and short-term memory. Subjects for all experiments were 10 pairs of ninth- and tenth-grade students matched for sex and IQ but differing in the spelling score on the *Wide Range Achievement Test*. Experiment 1 was designed to measure reading rate in two passages of different degrees of predictability. Good spellers were faster readers than poor spellers. No significant effects were found for passage or the interaction between spelling ability and passage. In Experiment 2, the task was to identify matches and mismatches in pairs of nonwords presented singly on a computer screen for one second at a time. Good spellers performed better than poor spellers. Experiment 3 was designed to assess subjects' ability to reproduce the letters of a pronounceable nonword seen on a screen for 400 ms. An interaction was found between spelling ability and word length. Both groups recalled four-letter nonwords with equal accuracy, but good spellers outperformed poor spellers on nonwords of five to eight letters. Experiment 4 compared the two groups for short-term visual memory spans for digits, consonant-vowel strings, and consonants, under both simultaneous and sequential presentation methods. Good spellers had a better visual memory for all three content types and both presentation methods.

Elliott, Digby, & Hennessey, Bernie. Visual feature integration in learning disabled children. *Perceptual and Motor Skills*, December 1987, *65*, 927-932.

Examines the ability of learning disabled pupils to perform visual parsing and integration. Seven learning disabled children and six control children, all ranging from 9 to 11 years of age, were administered a visual-search task. Using a CRT presentation, children were shown a visual display and asked to judge whether a particular stimulus item was present. The visual targets were manipulated as to number of elements in the display and whether a single feature or conjoined features were presented. Targets were present half of the time and absent half of the time. Data were analyzed separately for each type of presentation. Significant main effects were found for group and array size. Learning disabled children required more time than the controls to detect single feature elements and to integrate feature elements into an object.

Patti, Paul; Kose, Gary; & Duncan, Joan. Effects of discrimination training on reading improvement among adults. *Perceptual and Motor Skills*, December 1987, *65*, 723-728.

Assesses the effect of training in perceptual discrimination on improving reading skills of college students. Subjects were freshmen enrolled in a developmental skills program designed for students with poor academic histories. Students were randomly assigned to three training conditions: (1) General Discrimination Group – 10 days of one hour per day training in general perceptual discrimination skills; (2) Reading Discrimination Group – 10 days in a standard basal program with vocabulary lists, sentence-completion tasks, and exercises in identifying paragraph themes; and (3) Study Skills Group – 10 days in a program designed to help organize time and maximize study efforts. Effectiveness of the three conditions was assessed by pre- and posttest performance on the *Embedded Figures Test* for field dependent/independent cognitive styles, the *Porteus Maze Test* for problem solving, and the *California Achievement Test* for reading. No significant differences were found between pre- and posttest scores on the three measures across all three conditions.

Kasserman, Jane E.; Yearwood, A. Alison; & Franks, Jeffery J. Contextual priming effects in perceptual identification. *Bulletin of the Psychonomic Society*, July 1987, *24*, 233-235.

Attempts to assess the relative contributions of automatic and controlled processes in perceptual identification of words. The 48 undergraduate subjects were assigned to a high- and low-related condition of perceptual identification. Twelve sentences were presented individually on a monitor. A test list of 48 prime-target words then was presented for subjects to identify. Target words consisted of (1) two words from the same sentence (related context), (2) two words from different studied sentences (unrelated context), or (3) a nonword prime and a word from a studied sentence (neutral context). Performance of the low-related context group was superior to that of the high-related context group. When the list included a high proportion of contextually related pairs, facilitation for related-context pairs and inhibition for unrelated-context pairs were observed relative to comparable nonstudied pairs. In the low-proportion condition, performance was unaffected by the proportion manipulation. It is argued that contextual effects in perceptual identification reflect the operation of controlled processes.

Jacobs, Arthur M. On the role of blank spaces for eye movement control in visual search. *Perception & Psychophysics*, May 1987, *41*, 473-479.

Relates results of two experiments, the first investigating scanning behavior for a target letter and the second studying visual span size. In each study, subjects were eight adults at a university in France. Eye movements were monitored in Experiment 1 as subjects scanned sets of lines of *x*s in which a target letter (*c* or *k*) had been embedded. The lines of *x*s were in no-space or space conditions. The space condition was similar to a reading situation in that it presented blocks of characters separated by blank spaces. In the space condition, subjects tended to make more fixations and mean saccade size decreased significantly compared with the no-space condition. In Experiment 2, visual span for different target letters was found to be significantly smaller when blank spaces were present than when they were absent. This result was consistent for both target letters.

BRYANT, P.E., & SOMERVILLE, SUSAN C. The spatial demands of graphs. *British Journal of Psychology*, May 1986, *77*, 187-197.

Asks whether children can coordinate information from two axes of a graph and also whether non-perpendicular lines create problems for young children. Sixteen children at ages 6 and 9 were tested using two different graph-like displays. There were three different conditions for each display: (1) axis-to-axis, in which a position was given on either the vertical or horizontal axis and the child had to find the corresponding position on the other axis, (2) axis-to-line, and (3) line-to-axis. In the latter two conditions, the child had to extrapolate only one line. Problems were introduced using a Lego board with a line marked in tape diagonally across it and two small toy characters. The child had to place one character on an axis so that it would meet the first character at the 45° line (axis-to-axis), place a small block on the 45° line to indicate where the character would reach the line (axis-to-line), and choose a position on either the horizontal or vertical axis from which a character could walk straight to a block placed on the 45o line (line-to-axis). They then were given paper-pencil problems to do. Nine-year-olds made significantly smaller errors than did six-year-olds, but both groups tended to make accurate extrapolations in all three types of problems. Errors in the axis-to-axis condition were not significantly different from the mean summed errors in the other two conditions.

RANDALL, MICK, & MEARA, PAUL. How Arabs read Roman letters. *Reading in a Foreign Language*, Spring 1988, *4*, 133-145.

Compares in three experiments the way in which native Arabic speakers process strings of Arabic and Roman letters. All experiments presented visual stimuli on a microcomputer screen and reaction times for correct responses were collected. In Experiments 1a and 1b, subjects were, respectively, 21 Saudi Arabian trainee teachers and 8 Algerian graduate students. For Experiment 2, 12 Saudi Arabian trainee teachers were subjects. In the first two experiments, a set of 25 Arabic letters were used as stimuli; in Experiment 2, 25 Roman letters were used. In Experiment 2, data were collected at three points throughout the year and subjects' reading speeds in English were also assessed. In 1a and 1b, both groups appeared to scan arrays of Arabic letters in a right-to-left direction, and both groups produced a U-shaped search function when searching arrays of non-letter shapes. The latter is similar to the function produced by native readers of the Roman alphabet. Experiment 2 showed that subjects produced changes in their search strategy when presented with English characters. The processes used by the Arabic readers were more akin to the processes used by native readers of English when searching arrays of shapes: in scanning Roman letters they used a U-shaped search function.

IV-8 Reading and language abilities

INDRISANO, ROSELMINA, & GURRY, JOANNE M. In search of structure: Reading and television. In James Flood (Ed.) *Promoting Reading Comprehension*. Newark, DE: International Reading Association, 1984, 161-178.

Asks whether students' written narratives reflect the narrative schemata found in reading fiction or viewing television programs. The 79 ninth-grade students involved in the study were asked to complete three separate administrations of a questionnaire which included frequency of narrative writing and of dramatic or episodic television viewing. Based on questionnaire responses, three subgroups of students were identified: (1) those who stated they both read and viewed television (n = 28), (2) those who were readers or viewers (n = 34), and (3) those who did neither (n = 8). Each student then wrote a short narrative which was analyzed and categorized on an 11-point continuum of narrative complexity, divided into two clusters: (1) sequences and simple structures, and (2) episodes and more complex stories in which the protagonist demonstrated a goal and a plan for attaining it. Readers in all three subgroups wrote episodes more than they did sequences; viewers wrote more sequences. Readers, and readers and viewers, wrote stories ranked higher on the continuum than did students who did not read or view narrative material. The level of stories written appeared to be related to students' placements in four academic levels of the English program, with advanced placement students writing greater percentages of episodes than other students and non-college students having a greater proportion of sequences than others. A correlation of .34 obtained between self-reports of reading fiction and rankings of stories.

BROWN, DAVID L., & BRIGGS, L.D. Linguistic development of children and the syntax of basals. *Reading Horizons*, Fall 1986, *27*, 26-31.

Summarizes selected research on the relation between various aspects of children's language and the syntactic structures found in basal readers.

SHAPIRO, JON, & GUNDERSON, LEE. A comparison of vocabulary generated by grade 1 students in whole language classrooms and basal reading vocabulary. *Reading Research and Instruction*, Winter 1988, *27*(2), 40-46.

Compares the writing vocabulary generated by children in whole language classes with that contained in the basal reader series used in the same district. A total of 52 first graders in two Vancouver, British Columbia, classrooms designated as whole language served as subjects. Children wrote daily during a one-hour period. All the writing over a one-year period was collected. The 73,764 letter strings produced were broken down into 9,857 separate word types, 74 unknown words, and 3,402 misspellings. The 25 most frequently used words were compared with the words on the Dolch list and in the basal readers. Of the children's words, 96% were on the Dolch list and 100% in the first reader of the basal. Children's writings generated 86% of the vocabulary in the basal series. An analysis of children's misspellings indicated an overgeneralization of phonic principles. Children generated more words than would be encountered in the basal program.

LAZZARI, ANDREA M.; BENDER, WILLIAM N.; & KELLO, MARTHA N. Parents' and children's behavior during preschool reading sessions as predictors of language and reading skills. *Reading Improvement*, Summer 1987, *24*, 89-95.

Videotapes 38 parent/child dyads to determine which child and parent behaviors in an informal reading situation relate to children's language development and reading achievement. The children, 17 girls and 21 boys, ranged in age from 17 to 65 months. Parent questionnaires suggested that home reading environments were similar across families. Parents were told to read the story to their child as they would during a home reading session. Tapes were analyzed for eight behaviors: child questions, child statements, child pointing, child pronunciation of rebus words, parent pointing, parent questions, parent statements, and parent monitoring by eye contact during the reading session. Each child also completed the reading recognition (RR) subtest of the *Peabody Individual Achievement Test*, the grammatic closure (GC) and auditory memory (AM) subtests of the *Illinois Test of Psycholinguistic Abilities*, and the *Peabody Picture Vocabulary Test* (PPVT). Parental education level related significantly to reading recognition and auditory memory; child chronological age related to reading recognition; and PPVT score related to grammatic closure. PPVT scores also correlated significantly with rebus production. Child pointing behaviors contributed significantly to predictions of auditory memory. Parents' questioning behavior predicted variance in grammatic closure.

Pilkington, Cynthia L.; Piersel, Wayne C.; & Ponterotto, Joseph G. Home language as a predictor of first-grade achievement for Anglo- and Mexican-American children. *Contemporary Educational Psychology*, January 1988, *13*, 1-14.

Examines the utility of kindergarten screening devices for predicting first-grade achievement in Anglo- and Mexican-American children. Three sub-samples of kindergarten children were involved: (1) 97 Anglo-American English as home language (AA-E), (2) 74 Mexican-American English as home language (MA-E), and 75 Mexican-American Spanish as home language (MA-S). Prior to beginning the kindergarten year and again in the final two weeks of kindergarten, the following measures were given, all in English: *Boehm Test of Basic Concepts*; Draw-A-Design and Draw-A-Child subtests of the McCarthy Scales of Children's Abilities; and a criterion reference test (CRT) designed to assess seven different areas including color recognition, number recognition, shape recognition, letter recognition, recognition of first and last name, oral counting, and counting objects. Normal curve equivalent scores were obtained for total reading and math, with the *SRA Achievement Series* in first grade. AA-E children performed significantly better than either MA-E or MA-S children on the Boehm and CRT at the beginning and end of kindergarten. AA-E children also scored significantly better in math achievement than did the other two groups, but there were no significant differences in first-grade reading. The CRT was found to be a significant predictor of first-grade reading scores and the Draw-A-Design subtest was a significant predictor of math achievement for MA-S children, for AA-E and MA-E children, the Boehm emerged as a significant predictor.

Pickering, D.M., & Bowey, Judith A. Psycholinguistic performance of children varying in socioeconomic status and home-language background. *Perceptual and Motor Skills*, December 1985, *61*, 1143-1146.

Assesses verbal and nonverbal skills and reading achievement achievement of second-grade Australian children varying in socioeconomic and home-language backgrounds. Two groups of 15 children each from Greek-language backgrounds and differing socioeconomic status were matched with two groups of English-background children in age, school attended, and teachers. Children were administered individually the following measures: *Raven's Coloured Progressive Matrices, Peabody Picture Vocabulary Test* (PPVT), *Illinois Test of Psycholinguistic Abilities* (ITPA), and the *Neale Analysis of Reading Abilities*. Within the English background groups, the low status children scored as well as high status children on all nonverbal measures except Visual Association on the ITPA. On all verbal measures, differences favored the high status group except Auditory Closure on the ITPA. When low status English and Greek children were compared, the two groups scored at the same level on all nonverbal measures except Visual Association and Visual Closure. The English group scored higher on these as well as on the PPVT, Auditory Association, and Grammatic Closure. Differences were not found in reading achievement. English verbal deficits were associated with delayed reading achievement only for native English children.

Purcell-Gates, Victoria. Lexical and syntactic knowledge of written narrative held by well-read-to kindergartners and second graders. *Research in the Teaching of English*, May 1988, *22*, 128-160.

Collects data on and compares the oral and written narrative registers of 20 kindergarten and 20 second-grade children, all of whom had been read to extensively for the two years prior to their starting kindergarten. Oral register data called for children to tell the researcher about their most recent birthday party or another recent significant event. Written register data involved pretending to read a story to a doll using a wordless picture book. The audiotaped language samples were transcribed and then analyzed and marked for the occurrence of 15 lexical and syntactic features. A percentage score for each feature use per language sample was then calculated. Kindergarten children used 9 of the 15 lexical and syntactic features with greater frequencies in the written than in the oral registers. Second graders used 10 of the 15 features with greater frequencies in the written-narrative registers than in the oral registers. No significant differences were found between the two grades on any of the features analyzed. Analysis revealed that children who have been read to frequently expected the language of written narrative to be integrated, involving, literary, and decontextualized.

Bowey, Judith A. Syntactic awareness in relation to reading skill and ongoing reading comprehension monitoring. *Journal of Experimental Child Psychology,* April 1986, *41*, 282-299.

Views differences on a measure of syntactic control between skilled and less skilled readers. The sample studied included 48 fourth- and fifth-grade children attending a state primary school in Melbourne, Australia. Children were identified as skilled and less skilled readers based on the median split performance on the *St. Lucia Graded Word Reading Test.* Syntactic awareness was assessed by two parallel sets of 30 ungrammatical sentences; two tasks were called for, error imitation and error correction. Two standardized measures of comprehension were administered: the fourth-grade *Progressive Achievement Test of Reading Comprehension* and the *Gap Reading Comprehension Test.* Additionally, the *Peabody Picture Vocabulary Test* (PPVT) was given and an oral reading sample was collected. On syntactic awareness, skilled readers performed better than less skilled readers. The error imitation task was easier than the error correction task. Performance on the syntactic awareness task was correlated with various comprehension measures when PPVT score and subjective task decoding efforts were statistically controlled.

Richgels, Donald J. Grade school children's listening and reading comprehension of complex sentences. *Reading Research and Instruction,* Spring 1986, *25,* 201-219.

Presents two experiments examining the role of world knowledge and syntactic knowledge in elementary school age children's comprehension of spoken and written sentences. For Experiment 1, subjects were 32 children at each grade level: 2, 3, 4, and 6. Sixteen core sentences were each written eight ways, using eight possible sentence structures. Children received all 16 core sentences, half in spoken form and half in written form. Use of core sentences and use of the eight structures in which they appeared was systematically varied. After listening to or reading a sentence, children selected from four pictures the one that went with the sentence. Statistically significant results were found for reading ability, sentence condition, and reading ability X sentence condition. Children used and trusted syntactic information mostly with spoken sentences; only above average readers were able to do so in reading tasks, and then only with active sentences. Involved in Experiment 2 were 72 second grade pupils, who received one of three treatments: (1) sentence structure-training in attending to syntactic details, (2) world knowledge-training in entertaining interpretations contrary to world knowledge, or (3) practice. Training consisted of approximately 10 minutes of individualized coaching. Neither of the two trainings resulted in better performance than the other, nor was either better than practice.

Barnitz, John J. The anaphora jigsaw puzzle in psycholinguistic and reading research. In Judith W. Irwin (Ed.) *Understanding and Teaching Cohesion Comprehension.* Newark, DE: International Reading Association, 1986, 45-55.

Reviews briefly psycholinguistic and educational research that deals with pronoun reference, especially as it related to children's reading comprehension. Included is a 640-item bibliography.

REAGAN, ROBERT TIMOTHY. The syntax of English idioms: Can the dog be put on? *Journal of Psycholinguistic Research*, September 1987, *16*, 417-441.

Runs five experiments, all with undergraduates (n = 28, 20, 15, 20, 20) in an attempt to find out why some syntactic variations of some idioms are acceptable and others unacceptable. All experiments contained four tasks: (1) Idiom definitions, (2) Acceptability judgments of syntactic variations from a pool of eight possible variations, (3) Meaning closeness ratings in which subjects rated on a 7-point scale how close the meaning of each idiom was to the literal meaning, and (4) Meaning explications in which subjects were asked how the idiom came to mean what it did and rated their confidence in their explanation on a 5-point scale. Except for Experiment 3, in which examples were complete sentences, examples were sentence fragments. In the first three experiments, subjects saw eight syntactic variations of each of 12 idioms. For Experiment 4, there were seven syntactic variations of 15 idioms of Verb-(Determiner)-(Adjective)-Noun shape. In Experiment 5, 15 idioms having the syntactic shape Verb-Noun Phrase-Prepositional Phrase were again shown in seven syntactic forms. Subjects judged the acceptability of the 7 or 8 syntactic variations of each idiom. The number of idioms that each syntactic variation disrupted was counted for each subject and a disruptiveness index computed. The number of syntactic variations found acceptable by a subject was related to the number of other subjects who knew the idiom's definition. It was found that 86% of the judgments of acceptability of syntactic variations agreed with those identified introspectively in a 1970 article. If a particular syntactic variation of an idiom is acceptable, then all relevant variations equally or more disruptive were acceptable.

IRUJO, SUZANNE. Don't put your leg in your mouth: Transfer in the acquisition of idioms in a second language. *TESOL Quarterly*, June 1986, *20*, 287-304.

Designs research to assess the differential effects of transfer on the comprehension of idioms by second language learners. Subjects were 12 Venezuelans who were undergraduates at a U.S. university and who were advanced learners of English. Fifteen idioms of each of three types (identical, similar, and different) were included in tests designed to assess recognition, comprehension, recall, and production. The 15 identical idioms were identical in form and meaning to their Spanish equivalents, the 15 similar were similar to their Spanish equivalents, and the 15 different were different from corresponding Spanish idioms. Recognition was determined by a multiple-choice test, comprehension by asking subjects to write a definition in Spanish or English, recall by a discourse-completion or cloze type test, and production by a translation task. One-way analyses of variance indicated that subjects were performing differently with the three types of idioms. Identical idioms were easiest to comprehend and produce; similar idioms were comprehended about as well but showed interference from Spanish. Most difficult to pronounce and comprehend were different idioms, but these showed less interference than similar idioms. Both inter- and intralingual strategies were used in producing unknown idioms. Idioms that were comprehended and produced most correctly were ones that were frequently used and transparent and that had simple vocabulary and structure.

AMMON, PAUL, & AMMON, MARY SUE. Hidden resources in the reading and writing of bilingual children. In Malcolm P. Douglass (Ed.) *Claremont Reading Conference Fifty-first Yearbook*, 1987, 52-68.

Explores the reading and writing performance patterns of bilingual children. Although the data for a larger study came from 157 third- and fifth-grade Limited English

Proficiency children, the primary focus in this report is on the analysis of excerpts from the oral reading and the writings of seven children. Some of the original 157 children spoke Spanish; some, Cantonese. The authors note that while individual profiles can be utilized to identify areas of weakness to target for instruction, the identification of strengths is also important. Performance patterns can be used to identify both, but they need to be viewed in depth and over time.

Carey, Stephen T. Reading comprehension in first and second languages of immersion and francophone students. *Canadian Journal for Exceptional Children*, Winter 1987, *3*, 103-108.

Reviews research, including that of the author, which examines in particular the reading comprehension of Canadian students placed in French immersion programs. Several conclusions were drawn. First, reading comprehension remained higher in English than in French for academic materials at all grade levels. Thus it would appear that a variety of experiences within and beyond the school are essential for a student to attain a high level of language proficiency and literacy. Second, the development of oral fluency for social skills may mask a lack of literacy and academic language skills necessary for academic success in the second language. The evidence supports the view that the acquisition of reading skills and strategies are independent of specific language.

Oláh, Eva. How special is special English? In A.K. Pugh & J.M. Ulijn (Eds.) *Reading for Professional Purposes*. London: Heinemann Educational Books, 1984, 223-226.

Checks the difficulty involved in understanding texts on English for economic purposes read by Hungarian students. Text A was given to 11 students who had completed three years of English (intermediate); and Text B, to 14 students who had completed eight years of English (advanced). Students were to read the passages and translate them into Hungarian with the aid of a dictionary. In Text A, translation errors fell into the following major groups: (a) choice of wrong meaning of polysemantic words; (b) uncertainty in identifying parts of speech, especially with words that can function as both nouns and verbs; (c) misinterpretation of syntactic structures; and (d) failure to find the correct Hungarian equivalent. Although advanced students had fewer lexical and grammatical difficulties, they were not successful in obtaining the meaning of the entire selection.

Hall, D. Geoffrey, & Lambert, W.E. French immersion and hemispheric language processing: A dual-task study. *Canadian Journal of Behavioral Science*, January 1988, *20*, 1-14.

Examines hemispheric language processing in right-handed male students completing either early or late French immersion programs. Subjects were all grade 11 Anglophone students from a high school in Ontario, Canada, and included 16 enrolled in an early French immersion program, 16 enrolled in a late French immersion program, and 16 not enrolled in an immersion program who had received limited French instruction. Two linguistic tasks, reading aloud and identifying pictures of common objects, were performed concurrently with finger-tapping. Each task was performed once with the left and once with the right hand. Immersion students performed two sets of tasks, one in English and one in French. Finger tapping rates were measured at a baseline and while subjects concurrently performed the verbal tasks in each language. For all groups there was greater reduction in tapping with the right than with the left hand, suggesting more interference in the left hemisphere. It was felt that the results provided support for the position that early and late bilinguals do not differ from each other or from unilinguals in the hemispheric processing of language.

Barnett, Marva A. Syntactic and lexical/semantic skill in foreign language reading: Importance and interaction. *Modern Language Journal,* Winter 1986, *70,* 343-349.

Investigates the relative importance of lexical/semantic or syntactic knowledge or skills on the ability of English speaking readers to comprehend a French text. Undergraduates (n = 124) enrolled in a fourth semester French course were participants. Students read in French one of two texts, each about 600-650 words in length. Readings were first given as a 50-deletion cloze-type test with three multiple-choice responses for each blank. Correct choice for half the blanks depended upon syntactical knowledge; the other half depended upon vocabulary knowledge or attention to semantics. Following the cloze test, the original text with 300 additional words was read, and students were asked to write in English as much as they could recall. Protocols were scored using propositional analysis. Findings were that recall: (1) increased according to level of vocabulary proficiency, (2) increased according to level of syntactic proficiency, and (3) was related differentially to vocabulary and syntactic proficiency at medium and high levels of each but not at lower levels.

Kendall, Janet Ross; Lajeunesse, Greta; Chmilar, Paula; Shapson, Lusette Rauch; & Shapson, Stan M. English reading skills of French immersion students in kindergarten and grades 1 and 2. *Reading Research Quarterly,* Spring 1987, *22,* 135-159.

Studies the development of the English graphophonic and word knowledge of Canadian children in French immersion (FI) programs and compares them with the performance of children in regular English (ENG) classrooms. Word identification strategies of 52 FI and 57 ENG children were tested at the beginning and end of kindergarten. The same children were retested at the end of first grade (n = 46 FI, 47 ENG) and again at the end of second grade. The *Letter and Word Reading Test* was used to assess word identification skills and strategies. In addition, an oral reading and comprehension test containing selections from the *Standard Reading Inventory* was given in first and second grades. Teacher and parent interviews were used to supply additional information. At all grade levels, most FI children differentiated between reading in French and reading in English. Quantitative analyses showed no differences between the two groups in kindergarten, but ENG children scored higher than FI children on most measures in first and second grade. Qualitative analyses indicated that FI children were transferring French reading skills to English; by the end of second grade there was little interference from French reading skills. Many FI parents reported helping their children to read English at home, even when asked not to do so.

Lundberg, I. Linguistic awareness as related to dyslexia. In Yngve Zotterman (Ed.) *Dyslexia: Neuronal, Cognitive & Linguistic Aspects.* New York: Pergamon Press, 1982, 141-151.

Reports a series of four experiments that explore the relation between linguistic awareness and dyslexia. Study 1 sought to identify specific metalinguistic skills predictive of early reading success. A sample of 200 children was tested in kindergarten, at the end of grade 1, and in the first semester of grade 2. Path analysis revealed that achievement levels in reading and spelling could be validly predicted from a child's phonemic awareness skills before formal reading instruction started. In Study 2, deficient and normal readers were given an Auditory Closure Test and a project-developed phoneme deletion test. Although significant differences were found between poor and normal readers for both tests, the deletion task had greater discriminating power. Study 3 replicated the procedures of the second study in a cross-sectional analysis across grades 2, 3, 4, 5, and 6. Significant differences between poor and normal readers were only found at grade 2. Study 4 summarized the results of a series of cooperative studies of learning disabilities in the early grades. For the most part, the results replicate the findings of Study 2 and 3, but not as dramatically, due to the careful matching on intelligence.

Siegel, Linda S., & Ryan, Ellen B. Development of grammatical-sensitivity, phonological, and short-term memory skills in normally achieving and learning disabled children. *Developmental Psychology,* January 1988, *24,* 28-37.

Examines the development of several grammatical-sensitivity and phonological skills in normal achieving children and in children with various types of learning disabilities. Included were 138 children achieving normally, 66 children with a reading disability, 63 children with an arithmetic disability and normal reading scores, and 15 children with an attention deficit disorder but normal achievement scores. Children ranged in age from 7 to 14 years old. Reading and arithmetic disabilities and normal achievement were all determined by scores on the *Wide Range Achievement Test* (WRAT); an attention deficit disorder was by a score on the *Conners Parent Questionnaire.* Administered were grammatical-skills tasks, phonological- and reading-skills tasks (reading and spelling nonwords, reading regular and exception words, *Gilmore Oral Reading Test,* Visual Form of Sounds subtest of the *Gates-McKillop Test*), and short-term memory tasks. Correlation coefficients between the WRAT word recognition and the other reading measures ranged from .55 with rate on the Gilmore to .86 with reading of nonwords. Grammatical sensitivity and short-term memory were significantly correlated with various reading measures ($r = .48$ to .59). Reading disabled children showed a significant lag in the development of grammatical sensitivity, short-term memory, and phonological skills. Arithmetic disabled pupils had adequate grammatical abilities but below-average memory skills. Children with an attention deficit showed difficulties with reading-comprehension.

van den Broek, Paul. The effects of causal relations and hierarchical position on the importance of story statements. *Journal of Memory and Language,* February 1988, *27,* 1-22.

Investigates the effects of hierarchical ordering, statement connectivity, and statement category on the importance of statements in narrative stories. A cross-sectional sample of 756 subjects from eight classes at each of four grade levels (3rd, 6th, 9th, and 11/12th) were asked to read and judge the importance of statements in one of eight possible versions of the same story. The story versions had been developed so that the effects of hierarchical level and connectivity could be studied independently for goals and outcomes. A regression analysis on the importance judgments for goals revealed that connectivity exerted a strong influence but hierarchical level did not. When the same analysis was done on the importance judgments for successful outcomes, connectivity did not significantly influence the outcome's importance but hierarchical position did. Further analysis revealed that the success/failure of outcomes and the story structure significantly influenced importance. The interaction between the success/failure variable and story structure was also significant. Statements of setting were judged to be more important in the sequential versions than in the hierarchical versions but initiating events were rated more important in the hierarchical versions.

Sternglass, Marilyn S. Instructional implications of three conceptual models of reading/writing relationships. *English Quarterly,* Fall 1987, *20,* 184-193.

Compares and contrasts three models of the relation between reading and writing processes and how they influence instruction. Includes research undergirding each model. The parallel processes model views reading and writing as separate but related processes. Thus, reading and writing are taught discretely. In the interactive processes model, reading and writing are both viewed as constructive processes, but priority is given to having the reader recreate the author's intended meaning. The transactional processes model represents a more recent view of the reading-writing relation in which meaning is composed by both reader and writer, influenced by the environment, with the ultimate outcome being greater than the sum of its parts. The author advocates the transactional processes model as the approach that would allow teachers to best take advantage of what we know of reading and writing.

SHANAHAN, TIMOTHY. The shared knowledge of reading and writing. *Reading Psychology,* April-June 1987, *8,* 93-102.

Investigates the magnitude of the relation between reading and writing processes for 256 second graders and 251 fifth graders. Data from four reading measures (comprehension on standardized reading tests, cloze, vocabulary, and phonics assessments) and eight writing measures (three measures of spelling, vocabulary diversity, syntactic complexity, and three story grammar measures of organization) were entered into 24 separate backward stepwise regressions to test the strength of the reading-writing relation. Regressions in all cases were significant, with reading variables resulting in significantly higher amounts of explained variance than writing variables. Reading whether measured by a phonics test, a cloze test, or a score on a standardized comprehension measure could be predicted equally well by the various sets of writing variables. Spelling showed substantially stronger relations with reading than did any of the other writing measures. Visual-lexical and phonemic information are independent sources of knowledge in reading and writing. The coefficients of correlation between reading and writing variables were significant, but lower than would be expected if the processes were assumed to be identical.

LEWIS, JANICE, & CARTER-WELLS, JO ANN. A causal model of reading achievement and expository writing performance among selected college freshmen. *Journal of College Reading and Learning,* 1987, *20,* 36-46.

Constructs and tests a theoretical model of reading and writing. First, a model was developed that explained the relation between reading and writing and related variables. The model was based on a set of assumptions that grew out of previous research and theoretical discussions in the literature. The model included oral language, study attitudes and methods, prior knowledge, reading, logic and organization, vocabulary, sentence construction, and writing. The variables in the model were operationalized using test and biographical information on a sample of 91 college freshmen that had been collected from a previous research project. Path analysis was used to test the model. The data supported two of the model's assumptions: (1) that much of what one knows about writing is learned through reading; and (2) that the links between reading and writing are vocabulary facility, awareness of the ways sentence components can be arranged to make meaning clear, and facility with the ways ideas are related and can be arranged in logical sequence. The data did not support the variables assumed to explain the variance in reading scores.

GERHARD, CHRISTIAN, & SMITH, LAURA. The secondary student's approach to expository text processing. In Betty Root (Ed.) *Resources for Reading: Does Quality Count?* Proceedings of the Twenty-Second Annual Conference of the United Kingdom Reading Association, 1985, 140-152.

Presents a descriptive and exploratory assessment of 450 suburban middle-class students' ability to write expository paragraphs. Subjects, enrolled in a private school, were from 12 to 17 years old, and enrolled in grades 7-12. After receiving instructions orally and in writing, subjects picked one of three clusters of words to write about. Each group had four words, and students selected the one word which could be a superordinate for the other three and used that word as a basis for the first sentence of a paragraph. Words 2, 3, and 4 were the bases for three more sentences to complete the paragraph. Paragraphs were scored by two independent evaluators. In addition, they noted the numbers of students writing to the expository text assignment, the number using the first person "I", and the number writing at least one complex sentence. Differences between boys and girls' papers were also noted. The proportion of students choosing the correct superordinate word significantly increased with grade level, although there wasn't a linear progression. Girls did not consistently choose the correct superordinate more often than boys; correct choice seemed to vary with age and category. Significantly more younger students wrote narrative rather than expository text, and used the first person "I." At each grade level, over 40% of the students used complex sentences.

IV-9 Vocabulary and word identification

Hargis, Charles H.; Terhaar-Yonkers, Marge; Williams, Patricia Couch; & Reed, Mellissa Testerman. Repetition requirements for word recognition. *Journal of Reading*, January 1988, *31*, 320-327.

Checks the number of repetitions of words needed by mildly handicapped individuals before the words could be recognized on a word recognition test. Subjects for the study included 15 learning disabled and 2 mildly retarded children, ages 8-7, to 13-9. Reading grade levels on the *Peabody Individual Achievement Test* ranged from 1.5 to 3.0. Two subsets of eight words each were developed, one subset presented in isolation and the other presented in the context of a story. The 16 words in the two subsets contained 4 high imagery nondecodable words, 4 high imagery decodable words, 4 low imagery decodable words, and 4 low imagery nondecodable words. A word was presented until a child could identify it correctly three consecutive times. Two posttests were administered, one five days following mastery of a word and another two weeks later. Words presented in isolation required significantly more repetitions than did words in context. Low imagery words required more repetitions than high imagery words. Mean repetitions required for decodable words was 48; for nondecodable words 51 ($p< .0151$). Low imagery words presented in isolation required significantly more repetitions than did any other group; high imagery, decodable words required the least number of repetitions.

Buss, Ray R.; Coon, Robert C.; & Williford, Elizabeth B. When is a word a word: The development of word knowledge. *Journal of Genetic Psychology*, September 1987, *148*, 271-278.

Attempts to explore developmental changes in understanding of the concept of a word. Subjects included 31 first graders, 31 third graders, 29 fifth graders, 26 seventh graders, and 27 college students. A six-level hierarchy task was developed with 15 stimuli at each level. Level 1 consisted of letter strings without vowels and without orthographic regularity, while Level 6 consisted of common words. Subjects were individually asked whether each string was a word or not and to indicate how certain they were of their decision. Older subjects were more accurate than younger ones, and levels lower in the hierarchy were more easily mastered than those higher up in the hierarchy. Older children (fifth and seventh graders) were less confident of their judgments of word-like strings and unfamiliar words than were younger children. This latter finding suggests that in later childhood a more knowledge-based evaluation of meaning is used to determine when a word is a word. both appearance and meaning are taken into account increasingly as children grow older.

Katz, Robert B., & Shankweiler, Donald. Repetitive naming and the detection of word retrieval deficits in the beginning reader. *Cortex*, December 1985, *21*, 617-625.

Asks whether there is a relation between naming times on a repetitive naming task and reading achievement test scores among 16 children from two second grade classrooms.

Administered were the word identification and word attack subtests of the *Woodcock Reading Mastery Tests* and the *Peabody Picture Vocabulary Test*. Using Woodcock scores, children were designated as skilled or less skilled readers. Stimuli consisted of five categories (animals, objects, colors, lower-case letters, and common words) arrayed in consecutive rows, with five items of a single category constituting an array. Children were to name each item as rapidly as possible; total response times for all items were recorded. Less skilled readers were slower than skilled readers at naming letters and words, but there was no difference between the two groups on naming times for other categories.

Boesl, Sharon L., & Schwantes, Frederick M. The unit of processing in children's word recognition. *The Psychological Record*, Fall 1985, *35*, 503-511.

Studies the perceptual unit used by children during word recognition. Subjects were 27 third graders and 27 undergraduate college students. Stimuli consisted of nine-word sentences, with each sentence containing a target letter within a target word, each unique to the sentence. Subjects were required to find the target word or target letter in each of three search conditions: (1) word/word – find the word in a scrambled rearrangement of the sentence; (2) letter/word – find the letter in the scrambled sentence; and (3) letter/letter – find the letter in scrambled rearrangements of the letters of each word. Within each search condition, 60% of the trials required a positive response (target present), and 40% required a negative response (no match present). Mean search time was faster: (1) in the word/word condition vs. the letter/word condition for both age groups, and the magnitude of the difference was larger for third graders; (2) in the letter/word condition vs. the letter/letter condition in both age groups; and (3) in the word/word condition vs. the letter/letter condition in both age groups, with the magnitude of the difference greater for the children. Results are interpreted as indicating that young children use the whole word as the unit of processing.

Jacoby, Larry L., & Hayman, C.A.G. Specific visual transfer in word identification. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, July 1987, *13*, 456-463.

Conducts three experiments to study the effects of specific visual practice on word identification. Subjects in all three experiments were volunteers from an introductory psychology class and numbered 24, 18, and 18. Stimuli were five letter words presented in either uppercase or lowercase in a study phase, and then tested by tachistoscope in either the same case or the opposite case from that in which they had been studied. There were 120 words for study, and a list of 180 words presented for perceptual identification. Half the words studied were given in lowercase, half in uppercase. Results of Experiment 1 indicated evidence of specific transfer only for words that had been tested in lowercase. Words which were both tested and presented in lowercase were more readily identified than words previously presented in uppercase. Experiment 2 utilized a poorly formed and larger typography for half the words and standard lowercase for the other half, with all testing done in the latter case. Degraded words resulted in less transfer than did the lowercase words. In Experiment 3, letters were presented one at a time from left to right with no two letters seen simultaneously. Reading a word letter-by-letter produced about the same amount of transfer to its later identification in lowercase as did the degraded version or the standard uppercase version form Experiment 1.

Forster, Kenneth I. Form-priming with masked primes: the best match hypothesis. In Max Coltheart (Ed.) *Attention and Performance XII: The Psychology of Reading*. Hillsdale: Lawrence Erlbaum Associates, 1987, 127-146.

Reports three experiments testing alternative theories of form-priming. Adult subjects for the experiments numbered 10, 18, and 36, respectively. Experiment 1 tested the best match hypothesis of priming using 64 words of eight or more letters in length; Experiment 2 tested substitution priming in a high-density case using 48 four-letter words as targets; Experiment 3 tested the effect of an intervening word on identity and substitution priming. In Experiment 1, four sets of materials were constructed so that for each target word there were four primes: identify, substitution-word, substitution-nonword, and control word. Items were presented on a computer-controlled video display with primes always in lower-case and targets in upper-case letters. Subjects were to make lexical decisions on the target. All three form-related primes produced significantly faster response times than the control condition; substitution-word primes produced somewhat stronger priming than did substitution-nonword primes. Responses in the identity condition were significantly faster than responses in other conditions. Other experiments suggested that substitution priming in a high-density neighborhood with the lexical decision task cannot be restored by minimizing the number of neighbors of the prime. Substitution priming persisted across an intervening word. It is concluded that the priming effect is quite complex and seems to have the properties of both an activation effect and a repetition effect.

Shimamura, Arthur P. Word comprehension and naming: An analysis of English and Japanese orthographies. *American Journal of Psychology*, Spring 1987, *100, 15-40.*

Reports three experiments exploring comprehension and naming of logographic and phonetic symbols in both Japanese and English readers. In Experiment 1, 16 native Japanese readers, ages 20 to 35, were given a Japanese version of the Stroop test. Three Stroop conditions were presented: (1) black print: color names written in black ink; (2) control: colored patches consisting of three colored Xs that conveyed no verbal meaning; and (3) Stroop conflict: color names printed in an incongruous color. The black print and Stroop conflict conditions were presented using both Kanji (logographs) and Kana (phonetics). In the black print conditions, subjects were to read word stimuli aloud; in the other conditions, subjects were to name the ink color of each stimulus. Words written in Kanji produced longer response times than words written in Kana, although words written in Kana were named faster. Experiment 2 utilized 24 American undergraduates who were asked to indicate the spatial location of a word or arrow placed either above, below, to the left, or to the right of center. A Stroop-like interference was produced by having the stimuli indicate directions that were incompatible with its position. In Experiment 3, 12 native Japanese subjects who understood English were shown an arrow or a word written in Kanji or Kana above, below, to the left, or to the right of a center fixation point. Directions and procedures were similar to those in Experiment 2. For both Japanese and English readers, logographic symbols were identified faster than phonetic symbols, but phonetic symbols were named faster. It is concluded that by varying orthography, it is possible to dissociate word comprehension from word naming.

Besner, Derek. Visual word identification: Special-purpose mechanisms for the identification of open and closed class items? *Bulletin of the Psychonomic Society*, March 1988, *26*, 91-93.

Examines the claim that word class differences are apparent in tachistoscopic reports. Twenty paid undergraduates were shown 32 open class (content) words and 32 closed class (function) words on a microcomputer and asked to orally read each word. Mean proportions of correct identification were .520 for closed class and .514 for open class words. The findings did not support the hypothesis that class-specific devices underlie word identification in intact subjects.

Humphreys, Glyn W.; Besner, Derek; & Quinlan, Philip T. Event perception and the word repetition effect. *Journal of Experimental Psychology: General*, March 1988, *117*, 51-67.

Reports five experiments examining repetition effects on tachistoscopic word identification with masked and unmasked primes varying in lag (to the targets) and word frequency.

College students served as subjects in all experiments. In each of the first three experiments there were 16 subjects, while subjects numbered 20 for Experiments 4 and 5. Experiment 1 compared repetition effects with masked and unmasked primes in a tachistoscopic identification task. Examined, too, were repetition effects between high- and low-frequency words and also whether the effects with masked primes remain when repetitions are separated by a number of intervening items. Stimuli consisted of 60 high- and low-frequency words each. Experiments 2 and 3 added control conditions to assess why some of the results occurred in Experiment 1. Experiments 4 and 5 provided data on the persistence of repetition effects with masked and unmasked stimuli across a range of prime-target lags. Qualitative differences in lag effects were found between masked and unmasked primes, with only unmasked primes producing long-lasting repetition effects. Masked primes facilitated performance under conditions in which subjects did not discriminate the presence of prime letter strings; unmasked primes only facilitated target identification when there were visual cues segmenting primes from targets.

Besner, Derek, & McCann, Robert S. Word frequency and pattern distortion in visual word identification and production: An examination of four classes of models. In Max Coltheart (Ed.) *Attention and Performance XII: The Psychology of Reading*. Hillsdale: Lawrence Erlbaum Associates, 1987, 201-219.

Examines how lexical decision and naming are affected by showing the letters of a word or nonword in different cases and how such effects are influenced by word frequency. Subjects were 128 undergraduates, 64 of whom took part in a lexical decision experiment and 64 who took part in a naming experiment. Stimuli were four sets of 30 high-frequency words, 30 low-frequency words, and 60 nonwords. Each subject saw two of the four sets, half in lower case and half in alternating case, but with the first letter of a string always in lower case. The lexical decision task consisted of half words and half nonwords; half the words were high frequency, half, low frequency. The naming task consisted only of the words used in the lexical decision task. Stimuli appeared on a microcomputer screen with lexical decision and naming times recorded. Words were more impaired by pattern distortion in the lexical decision task than in the naming task. Pattern distortion impaired words more than nonwords in the lexical decision task. Low-frequency words were more impaired than high frequency words by pattern distortion in naming. Word frequency and pattern distortion were additive factors in the context of lexical decision. Results were compared with four word identification models and were found inconsistent with all. A new framework is proposed.

Brown, Patrick, & Besner, Derek. The assembly of phonology in oral reading: A new model. In Max Coltheart (Ed.) *Attention and Performance XII: The Psychology of Reading*. Hillsdale: Lawrence Erlbaum Associates, 1987, 471-489.

Cites four experiments requesting subjects to pronounce nonwords for which pronunciation variability was confined to two contiguous letters: CC or OU. Subjects were all Canadian university students. All experiments focused on orthographic analogy theory. Subjects in Experiment 1 were approached and asked how to pronounce a single nonword. In Experiment 2, subjects pronounced priming words prior to the nonword string. In Experiment 1, critical strings were HACCID and HACCEDE; in Experiment 2, HACCEL with no prime or "Success" or "axle" as primes. Experiment 3 used a series of double C strings. Experiment 4 had stimuli using OUN. No model based strictly on orthographic parameters accounted for the findings. In all three experiments using double C words, the pronunciation "s" occurred 80% of the time, and ks, 20% of the time. A model is proposed to explain the results.

Zinna, Danielle R.; Liberman, Isabelle Y.; & Shankweiler, Donald. Children's sensitivity to factors influencing vowel reading. *Reading Research Quarterly*, Fall 1986, *21*, 465-480.

Presents two experiments with elementary school children. In the first, the development of children's understanding of vowel digraph pronunciation was studied. Subjects for Experiment 1 were 30 children in each of grades 1, 3, and 5, all identified as average or above average readers. Children were asked to read two lists of high- and low-frequency monosyllabic words containing vowel digraphs with variant and invariant pronunciations. Both word frequency and variability in pronunciation of the vowel digraph were systematically controlled in the two lists. In addition, for variant digraphs the word's level of consistency of pronunciation as a vowel digraph-final consonant unit was determined to be consistent or inconsistent (orthographic neighborhood consistency). Word frequency and variation in pronunciation of the digraph unit affected the accuracy of all groups; only third- and fifth-graders showed sensitivity to orthographic neighborhood consistency. In Experiment 2, the third graders were asked to read 60 monosyllabic pseudowords containing vowel digraph units with variant pronunciations. Results supported the influence of the vowel digraph-final consonant unit in determining the rendering of the vowel. There was greater uniformity in pronunciation of pseudowords ending in vowel digraph-final consonant units from consistent orthographic neighborhoods. Where there was less uniformity in pronunciation of such items, the initial segment appeared to account for most of the variability.

NAGY, WILLIAM E.; ANDERSON, RICHARD C.; & HERMAN, PATRICIA A. Learning word meanings from context during normal reading. *American Educational Research Journal*, Summer 1987, *24*, 237-270.

Investigates incidental learning of word meanings from context during normal reading. Subjects included 129 third graders, 85 fifth graders, and 161 seventh graders. Pupils were randomly assigned to read either two expository or two narrative texts taken from grade level books. At each level one expository and one narrative text was judged to be easier and one harder, depending upon the researchers' judgment as to how familiar the topic was. Experienced teachers at each grade were shown lists of the most difficult words from each text and asked to circle any that they felt an average pupil at that grade would find difficult to define. For each text, 15 words were identified as target words. Children then read two texts at their grade level but were tested on the target words from all four texts. A grade-appropriate vocabulary checklist was administered prior to the study and included target words, coding distractors, pseudo-derivatives, nonwords, and general vocabulary items. In the first of two experimental sessions, children were asked to read the two narrative or two expository passages. At a second session one week later pupils received a multiple-choice vocabulary test on target words. A small but reliable gain in knowledge of words was found at all grade levels and for all reading ability levels as determined by the Vocabulary and Reading Comprehension subtests of the *SRA Achievement Series*. The effects of word and text properties on learning from context were then examined. For word properties, only conceptual difficulty was related significantly to learning from context. Among text properties, learning was most strongly influenced by the proportion of unfamiliar words that were conceptually difficult and by the average length of the unfamiliar words.

KONOPAK, BONNIE C. Using contextual information for word learning. *Journal of Reading*, January 1988, *31*, 334-338.

Reviews selected research on the use of context for learning word meanings. In particular, limitations of context are cited and instructional implications presented. Six findings making for considerate text characteristics are noted: (1) proximity of relevant context to the unknown word, (2) clarity of the connection between context and word, (3) explicitness of the contextual information, (4) completeness of the contextual information, (5) importance of the unknown word to understanding the passage, and (6) familiarity of the text to the reader.

KONOPAK, BONNIE; SHEARD, CATHERINE; LONGMAN, DEBBIE; LYMAN, BARBARA; SLATON, EDITH; ATKINSON, RHONDA; & THAMES, DANA. Incidental versus intentional word learning from context. *Reading Psychology*, January-March 1987, *8*, 7-21.

Examines high school students' incidental learning of subject-specific vocabulary in content area textbooks. The 65 11th grade students who served as subjects were enrolled in three U.S. history classes. Subjects were stratified according to reading subtest scores on the *Stanford Test of Academic Skills*, then randomly assigned to one of two treatment groups or a control group within stratifications. Ten target terms were selected from a 1500-word passage in a U.S. history text. Two forms of the passage were constructed, one with target words underlined for the intentional learning treatment group and one without underlined words for the incidental learning treatment group. Controls were given a different passage of similar length. Intentional students also received the 10 target words in a list with instructions to look for the underlined words in the text and write a meaning for each based on the passage information. A pre- and posttest vocabulary measure included writing a definition and also indicating whether or not a word was known. Definitions were evaluated on a 0-4 scale. Intentional learning students showed the greatest gains, but incidental learning students showed some gain and an increase in confidence in their knowledge of a definition.

WATSON, RITA. Learning words from linguistic expressions: Definition and narrative. *Research in the Teaching of English*, October 1987, *21*, 298-317.

Describes two studies of the acquisition of word meaning. In the first study, 20 children at each of Junior kindergarten (mean CA = 5.0), grade one (mean CA = 7.0), and grade four (mean CA = 10.0) levels were randomly assigned to two conditions. Each child was individually read a narrative text in which four nonsense words were embedded. Each nonsense word was used four times with a definition given following its second occurrence. Children in the first condition received only the standard definition (no synonym); children in the second condition heard the complete definition with synonym. Immediately following the brief text and two weeks later, recall of the definition was assessed. In immediate recall, the youngest group averaged two out of the four words, while the grade four group averaged 3.9. For delayed recall, means were .4 for junior kindergarten, 1.0 for first grade, and 1.7 for fourth grade. No significant differences were found between the two conditions. Study II explored how a new, abstract word might be introduced and whether children would recall it. Subjects were two classes of preschool children, ranging in age from 3-6 to 5-1. The two teachers involved were given a word and asked to introduce it, using only language to do so. One teacher utilized an expository style; the other, a narrative style. Children in the narrative group showed superior recall of the word and its meaning.

NA, LIU, & NATION, I.S.P. Factors affecting guessing vocabulary in context. *RELC Journal*, June 1985, *16*(1), 33-42.

Attempts to identify what factors affect the difficulty of guessing the meaning of words in context. Subjects were 59 teachers of English as a second language, a few of whom were native speakers of English and a few of whom were reported as having considerable difficulty in communicating in English. Two sets of passages, each consisting of a short and long version of the same passage, were developed. In the shorter passage about one word in 10 was replaced with a nonsense word; in the longer passage, about one word in 25. All subjects were given the short passage first and told to replace all unknown words either with English words or with words from their native language. After completion of the short passage, they were asked to do the long passage. Judges evaluated all responses and scores of 100%, 80%, and 0% were given according to the degree of closeness to the text meaning.

Scores were analyzed for the effect of different densities (short passage = higher density; long passage = lower density) and parts of speech of unknown words. Scores were higher for the same words in the lower as opposed to the higher density passage. Verbs were easiest to guess the meanings of followed in order by nouns, adverbs, and adjectives.

McDaniel, Mark A. & Tillman, Vincent P. Discovering a meaning versus applying the keyword method: effects on recall. *Contemporary Educational Psychology*, April 1987, *12*, 156-175.

Compares two methods of learning new vocabulary. Forty-five college students were randomly assigned to three instructional conditions: (1) a no-strategy control condition; (2) a keyword condition in which the word to be learned was presented with a dictionary-like definition and paired with an acoustically similar word; and (3) a context condition in which subjects were told they would need to infer the meaning of the stimulus word from the context presented. Subjects were given 60 vocabulary words to learn under timed conditions. The learning session was followed by a free response task and a cued recall test. The keyword condition produced significantly better recall on the cued recall task but not for free recall. The results of a post-experimental questionnaire revealed that some context and control subjects spontaneously employed a keyword-like strategy, and these subjects scored higher on cued recall.

McDaniel, Mark A.; Pressley, Michael; & Dunay, Paul K. Long-term retention of vocabulary after keyword and context learning. *Journal of Educational Psychology*, March 1987, *79*, 87-89.

Assesses in two experiments the long-term retention of vocabulary acquired through the keyword or semantic-context approaches. Both experiments utilized introductory psychology undergraduate students. In Experiment 1, 22 students were randomly assigned to the keyword condition and 20 to the context condition; in Experiment 2, the numbers were 20 in each condition. In both experiments, 30 obscure English words were selected to be learned, with the time allotted for the context condition as the only difference between the two. Words were learned until all meanings could be correctly recalled; a cued-recall test was given one week later. The keyword subjects required significantly fewer trials to meet the criterion level in the initial learning. There were no significant differences in scores on the one-week retention test.

Pressley, Michael. Are keyword method effects limited to slow presentation rates?: An empirically based reply to Hall and Fuson (1986). *Journal of Educational Psychology*, November 1987, *79*, 333-335.

Responds to criticism that slow rates of item presentation lead to overestimation of mnemonic effects. Subjects were 96 undergraduate students. One-half were taught to use the keyword method to learn Latin words; the other half served as a control group. Subjects were assigned to one of two rates of presentation – one vocabulary item for 9 seconds or 3 in 3 seconds. As dependent measures, subjects recalled definitions and how words were learned. Significant main effects were found for presentation rate and type of instruction on the recall of definitions. A positive keyword effect was obtained regardless of the rate of presentation.

Smith, Brenda D.; Stahl, Norman; & Neil, John. The effect of imagery instruction on vocabulary development. *Journal of College Reading and Learning*, 1987, *20*, 131-137.

Explores the effectiveness of imagery in the learning and recall of definitions of previously unknown words. Involved were 142 undergraduate university students enrolled in six sections of a developmental reading course. Classes were assigned one of three experimental conditions: Definition Only; Definition and Sentence; and Definition, Sentence, and Image.

Scores on the *Basic Word Vocabulary Test*, administered prior to treatment, were used in a covariate analysis. Five new words were taught each day for 10 consecutive days, with a multiple-choice test over the 50 words on the 11th day and again two weeks alter. The first posttest, which was announced to students, showed no significant results among the treatment groups. On the delayed posttest, the means were progressively stronger with each treatment additive.

ZUCK, L.V., & ZUCK, J.G. The main idea: Specialist and non-specialist judgments. In A.K. Pugh & J.M. Ulijn (Eds) *Reading for Professional Purposes*. London: Heinemann Educational Books, 1984, 130-135.

Asks whether the choice of key words from and comprehension questions about a two-page biology text would vary between biology specialists and nonspecialists. Data were collected from 16 university level instructors, 6 of whom were biology specialists and 10 of whom were English as a Second Language (ESL) teachers. In each group half were native English speakers and half were nonnative English speakers. Participants were asked to complete three tasks with the text: (1) rate it on a 6-point scale in terms of difficulty for beginning biology students; (2) list 10 or fewer words or phrases essential to understanding the passage; and (3) write three to five questions to evaluate comprehension of the main idea. There was some lack of consistency within groups on the three tasks. The nonnative English speaking ESL group listed more words as essential, 61, than did any other group, with 16 of those words listed more than once. Nonnative English speaking specialists listed only 13 words as important, and none of these were listed more than once. Nonspecialists tended to ask questions as if all the information were factual, while specialists tended to ask questions reflecting the tentative argument presented by the author. There was systematic variation between specialists and nonspecialists in requests for definitions, recognition of certainty of claim, local versus global questions, implicit versus explicit information, and explicit use of rhetorical information to simplify.

STAHL, STEVEN A., & CLARK, CHARLES H. The effects of participatory expectations in classroom discussion on the learning of science vocabulary. *American Educational Research Journal*, Winter 1987, *24*, 541-555.

Examines the effects of classroom discussion on the learning of science vocabulary. Four intact classes of fifth graders were used for the study. Two classes participated in the treatment conditions and two served as controls. Pupils in the treatment classes were randomly assigned to one of three subgroups: (1) a Listening group that was told they would not participate but would learn by listening; (2) a Called-on group that was to contribute to the discussion; and (3) an Ignored group that was told they would participate but pupils were never called upon. On three successive days, six words taken from three 600-word passages on astronomy were taught using a semantic mapping technique. A repeated measures design ensured that each student participated in all three subgroups. Two posttests, a sentence anomaly task and a multiple-choice test, were used to assess vocabulary learning. One of the control classes read the passages and took the sentence anomaly tests; the other took all posttests without seeing the passages. All three experimental conditions produced significantly greater vocabulary learning than the controls. Students in the anticipatory treatments (Called-on and Ignored) outperformed the Listening group on the delayed but not the immediate posttest.

GARBE, DOUGLAS G. Mathematics vocabulary and the culturally different student. *Arithmetic Teacher*, October 1985, *33*(2), 39-42.

Reports a study of mathematics vocabulary using Anglo and Navajo Indian pupils in grades 4, 5, and 6 as subjects. Fourth-grade teachers in the rural schools involved were asked to submit mathematical terms with which their pupils would be familiar. Following pilot work, 19 terms were selected and used in a two-choice format. Each term appeared more than once. Choices for terms included definitions, examples, and drawings. The instrument was administered to 255 Navajo and 135 Anglo pupils. Navajo children exhibited particular difficulty with terms that sounded like other commonly used words. Additionally, Navajos had problems with terms expressing comparisons such as "greater than."

MOORE, DAVID W. Vocabulary. In Donna E. Alvermann, David W. Moore, & Mark W. Conley (Eds.) *Research Within Reach: Secondary school Reading*. Newark, DE: International Reading association, 1987, 64-79.

Presents research based information about teaching vocabulary, including what words to teach, the effect of teaching the vocabulary of a passage on subsequent comprehension of the passage, and the utility of four specific methods: categorizing words semantically, using imagery, applying sentence contexts, and attending to morphemics.

MOORE, PHILLIP. On the incidental learning of vocabulary. *Australian Journal of Reading*, March 1987, *10*, 12-19.

Focuses on the role of independent reading in the vocabulary growth of children. Selected literature on incidental learning of vocabulary is reviewed briefly. It is argued that children can learn word meanings without direct vocabulary instruction and that increasing the amount of independent reading done is a means of facilitating such growth.

HAGGARD, MARTHA RAPP. The vocabulary self-collection strategy: Implications from classroom practice and research. In Malcolm P. Douglass (Ed.) *Claremont Reading Conference Fiftieth Yearbook*, 1986, 340-351.

Gives information on a follow-up study to determine the effect of long term retention of words and word meanings. In the original study, 42 university students were asked to log their vocabulary development over a six-week period. Log entries were used to identify six categories of motivating factors for learning words. In the present report, 20 words from each of 24 of the 42 original logs were randomly selected. Individual lists were then mailed to the 24 subjects asking them to define as many words as they could from memory. Ten subjects replied. Correct definitions ranged from 5% to 65% with a mean of 38%.

KONOPAK, BONNIE C. Effects of inconsiderate vs. considerate text on secondary students' vocabulary learning. *Journal of Reading Behavior*, 1988, *20*(1), 25-41.

Examines the effect of rewriting expository text to enhance vocabulary learning. A sample of 59 eleventh grade students, classified as high- and average-ability readers, was asked to read two U.S. history passages each approximately 1500 words in length. The original passages were inconsiderate in that they did not contain adequate contextual information for learning target words from context. The revised passages were rewritten following text characteristics of completeness, explicitness, proximity, and clarity for the ten target words. Pre- and posttests included a self-report measure of word knowledge and a test of word meanings. An additional posttest asked students to state the importance of each word in studying the topic. It was found that high-ability students outperformed average-ability students and that all students scored significantly higher on the posttests. Students in both ability groups scored higher on the definition and significance measures, but not on the self-report measure of word knowledge, when reading the revised passages.

WHITE, HOWARD; VIERMA, GAYLE; KANG, HEE-WON; KRASHEN, STEPHEN; & TRITICA, DIANNE. Attitudes toward vocabulary acquisition among college freshmen: Are students aware of the power of reading? *Reading Improvement*, Winter 1987, *24*, 273-277.

Submits a short questionnaire to two samples of college freshmen (n = 25, 34) asking them to rate seven methods of increasing vocabulary in terms of which were most effective and most pleasant. Each method was rated on a five-point scale. Reading was rated highest for both effectiveness and pleasantness with drills and exercises rated among the least effective.

THAMES, DANA G., & READENCE, JOHN E. Effects of differential vocabulary instruction and lesson frameworks on the reading comprehension of primary children. *Reading Research and Instruction*, Winter 1988, *27*(2), 1-12.

Compares the effectiveness of three methods of vocabulary instruction on reading comprehension. A group of 75 second graders were randomly assigned to three methods of vocabulary instruction: the traditional basal approach, the Reconciled Reading Lesson (RRL), and the List-Group-Label approach. All groups used the same three unfamiliar basal reader selections for instruction. Trained researchers followed scripted lessons for each approach. Pupils were given a 30-item multiple-choice pretest of vocabulary contained in the three stories. Following each story, children were administered a 20-item multiple-choice posttest that contained 10 vocabulary items and 10 comprehension items. A repeated measures analysis of variance revealed a significant treatment effect in favor of the RRL.

DEMPSTER, FRANK N. Effects of variable encoding and spaced presentations on vocabulary learning. *Journal of Educational Psychology*, June 1987, *79*, 162-170.

Reports a series of five experiments investigating the applicability of variable encoding and the spacing effect on vocabulary learning. Encoding was manipulated by varying the number of potential retrieval routes. Three conditions were used: (1) a no-context control condition in which words were presented with their definitions only; (2) a single-sentence context condition; and (3) a three-sentence context condition. Two types of spacing, massed versus spaced, were also examined. The major dependent measure was the number of word meanings recalled. Subjects in all five experiments were undergraduate students enrolled in educational psychology courses. The results of all five experiments indicated that recall was not significantly affected by number of retrieval routes. The three-sentence context was not more effective than the one-sentence context and context conditions failed to lead to better recall than the no-context condition. Subjects recalled significantly more when material was distributed than when it was presented in massed, closely spaced repetitions.

CARR, EILEEN M., & MAZUR-STEWART, MARIANNE. The effects of the vocabulary overview guide on vocabulary comprehension and retention. *Journal of Reading Behavior*, 1988, *20*(1), 43-62.

Investigates the effectiveness of the Vocabulary Overview Guide (VOG). The VOG is an instructional tool that incorporates techniques that have been previously validated in other research studies, such as activating background knowledge, relating text information to background knowledge, reflecting and rehearsing information, and using self-monitoring activities. Approximately 50 developmental college students were assigned to either the VOG treatment or a List Treatment group that used a traditional method of listing and studying definitions. Although all students read the same text material over a two-week period, vocabulary instruction differed. Pretest, posttest, and delayed posttest measures were used to assess vocabulary and metacognition. Significant treatment effects were found in vocabulary comprehension and retention and metacognitive awareness in favor of students using the VOG.

IV-10 Factors in interpretation

THOMSON, JACK. Developmental stages of literary response. *English in Australia*, December 1986, No.78, 16-25.

Attempts to construct a developmental model of stages of response to literature based on research with Australian adolescents. Data were collected from questionnaires completed by all the Year 8 (13-14 year olds) and Year 10 (15-16 year olds) students attending two state high schools in 1978 and 1984 (n = 1007), and interviews with 51 students. The 1978 interviews were reported to provide a tentative developmental model which was then tested in the 1984 interviews when an attempt to identify reading strategies associated with each response level was made. Questionnaires supplied data on what was read and why; interviews were used to obtain information on how students read and the process-stages students go through. Six stages are presented: (1) Unreflective interest in action; (2) Empathising with characters; (3) Analogising: Deriving insights from fiction for understanding oneself; (4) Reflecting on the significance of events and behavior; (5) Reviewing the whole work as the author's creation; and (6) Consciously considered relationship with the author, recognition of text ideology, and understanding of self and of one's own reading processes. Examples of process strategies at each of these levels are presented.

BEACH, RICHARD, & WENDLER, LINDA. Developmental differences in response to a story. *Research in the Teaching of English*, October 1987, *21*, 286-297.

Compares readers' inferences about acts, perceptions, and goals for six story incidents in one short story to determine if there were differences in cognitive and social development for eighth graders, eleventh graders, college freshmen, and college seniors. A total of 160 students, forty at each level, participated, reading one short story twice, and answering 11 questions about characters' acts, 6 questions about characters' perceptions, and 11 questions about characters' goals. Composite inference categories were rated for degrees of focus on social meanings, rather than physical actions, for focus on characters' beliefs, rather than characters' feelings, and for long-range social or psychological needs, as opposed to short-term physical actions. Grade had a significant overall effect on the ratings for act, perception, and goal inferences. Eighth graders and eleventh graders differed significantly from the college freshmen and juniors on all three scales. Eighth graders also differed from eleventh graders on social and psychological meanings ratings. Finding were consistent with previous cognitive and social development research.

NIPPOLD, MARILYN A.; MARTIN, STEPHANIE A.; & ERSKINE, BARBARA J. Proverb comprehension in context: A developmental study with children and adolescents. *Journal of Speech and Hearing Research*, March 1988, *31*, 19-28.

Examines the developmental nature of proverb comprehension in children and adolescents. The sample consisted of 60 subjects each in grades 4, 6, 8, and 10. Subjects were administered a 30-item proverb test in which proverbs were presented in written context with multiple-choice answer options, and the Figure Analogies subtest from the *Lorge-Thorndike Intelligence Tests*. Results of the proverb test showed that mean percentage correct increased with grade level with even the fourth graders scoring well above chance. A task by grade level ANOVA revealed significant interaction. The reasoning task was more difficult. Correlation coefficients between the proverb comprehension test and the reasoning task ranged from .27 to .65 and were significant at each grade level.

ZAHARIAS, JANE A. The effects of genre and tone on undergraduate students' preferred patterns of response to two short stories and two poems. *Research in the Teaching of English*, February 1986, *20*, 56-68.

Explores the differential effects of genre and tone on college students' preferred patterns of literary response to two poems and two short stories. Included were 166 undergraduate volunteers enrolled in nine introductory literature courses. After reading each of the literary works, students completed a modified version of the International Association for the Evaluation of Educational Achievement's *Response Preference Measure*. Data were analyzed by means of a two-factor repeated-measurement MANOVA, with genre and tone as within-subjects variables. Statistically significant multivariate main effects were found for both genre and tone; interaction effects were not significant. A series of 2 x 2 repeated-measures ANOVAs were performed on each of the four dependent measures of response preference: personal statement, description, evaluation, and interpretation. Students showed a preference for the descriptive response stance following the reading of the two lighthearted works. Works classified as having a serious tone tended to evoke personal, interpretive, and evaluative responses. A descriptive response stance was favored subsequent to the reading of poetry, but short stories elicited a preference for the personal statement response stance.

O'Brien, David G.; Higginson, Bonnie; & Miller, G. Michael. Factors affecting the interpretation of figurative language uses. *Reading Research and Instruction*, Winter 1986, *25*, 80-90.

Studies the relations among three general language competency factors and college students' ability to interpret two text formats. The 44 students were enrolled in a developmental studies program either as a result of scoring below the 15th percentile on the *American College Testing* Social Science or Natural Science subtests or as a result of experiencing academic difficulties in the previous semester. Eight passages were constructed in each of two formats, embedded and extension. In the embedded format, different target statements were included as the last statement in a context which supported either a literal or a figurative interpretation. In the extension format, students were asked to complete a passage with either a literal or figurative expression that they perceived as the most logical extension of what was written. Language competency measures included a Paradigmatic/syntagmatic Inventory (PSI), and the comprehension and word knowledge subtests of the *Stanford Diagnostic Reading Test* (SDRT). Pearsön product-moment correlation coefficients were computed for the three language competency factors with both literal and figurative texts in both formats. Additionally, the three language factors were entered together as predictors of performance on both tasks in both formats. SDRT vocabulary scores correlated .36 with performance on the embedded figurative tasks. PSI scores correlated .50 with scores on the extension literal task. Multiple regression analysis indicated that vocabulary was a statistically significant predictor of performance on the embedded figurative task, and PSI was a statistically significant predictor of performance on the extension literal task.

IV-11 Oral reading

Anderson, Richard C.; Wilkinson, Ian; Mason, Jana M.; Shirey, Larry; & Wilson, Paul T. Do errors on classroom reading tasks slow growth in reading? *Elementary School Journal*, January 1988, *88*, 267-280.

Questions the assumption that low rate of error in oral reading leads to growth in reading and suggests that oral reading errors can have a positive influence on children's reading comprehension. Proposes an alternate theory that oral reading errors followed by feedback fit a pattern of tension followed by resolution, a pattern related to research on learning and memory. A preliminary report of a microanalysis study of small group reading lessons is presented. Participants were 149 children in six third-grade classrooms. As part of the study, children received four reading lessons in their regular group from a grade appropriate story not in the basal being used. During two lessons, stress was placed on accurate oral reading (surface emphasis); in the other two, children answered a prediction question prior to reading each page (meaning emphasis). In the meaning emphasis approach, oral reading errors were ignored unless meaning was disrupted; in the surface emphasis, the teacher corrected all errors and the child repeated the correct word. It was found that oral reading errors contributed to comprehension among non-turn-takers when the task was fluent, accurate reading. Such errors did not appear to affect comprehension of non-turn-takers when the task was story understanding. Errors were negatively related to comprehension for turn-takers.

WILKINSON, IAN; WARDROP, JAMES L.; & ANDERSON, RICHARD C. Silent reading reconsidered: Reinterpreting reading instruction and its effects. *American Educational Research Journal*, Spring 1988, *25*, 127-144.

Reanalyzes data from an earlier study which found support for the use of increased silent reading in classroom reading instruction with learning disabled (LD) pupils. Findings from the research had been interpreted as demonstrating that time spent in silent, rather than oral, reading was positively related to reading achievement test gains. However, the authors of the critique contend that the original analysis incorrectly assumed error-free measurement and was unable to control fully for the differential relations between pretest performance and the reading activities in which pupils engaged. The reanalysis used linear structural equation modeling on the data. New findings indicated that pupils' entry-level reading abilities had a significant direct effect on time allocated to silent reading but not on time allocated to oral or indirect reading. With measurement error accounted for and initial abilities more adequately controlled, silent reading no longer was found to have a significant effect on posttest performance. There was a suggestion that oral reading may have more effect on final reading achievement.

COOPER, BARBARA A., & STEWART, KRISTA J. The influence of variations in syntax on oral reading fluency. *Journal of Reading Behavior*, 1987, *19*(2), 159-175.

Investigates the effect of selected syntactic structures on oral reading. A nominal construction (i.e. a noun modified by a participial phrase) that is usually not produced by children until grades five to seven was selected as the target structure and compared to a more common control structure consisting of a verb phrase that was part of a subject-verb-object clause. Subjects were fourth-grade pupils and college undergraduates. Experimental materials consisted of three narrative passages and two sets of six sentences. A repeated measures design was used that included two levels of subjects, two levels of structure (target vs. control), and two levels of task (passages vs. sentences). The dependent measure was the number of oral reading disruptions that occurred at control and target phrases. Significant main effects were found for structure and task, a significant two-way interaction between structure and task, and a significant three-way interaction between group, structure, and task. In general, the children had significantly more disruptions in reading the target structure than they did in reading the more common control structure.

KOLCZYNSKI, RICHARD G. Meaning change miscues across four modes of writing. *Perceptual and Motor Skills*, June 1986, *62*, 753-754.

Analyzes miscues of 20 college freshmen generated during the reading of four modes of writing: narrative, descriptive, expository, and persuasive. Reading and retelling of passages were taped. Analysis of variance procedures were used to test whether or not differences in the total number of miscues among the four passages were significant. No significant difference was found either in the total number of miscues among passages or in the number of miscues which did not alter the meaning of the content from the four passages.

FLEISHER, BARBARA M. Oral reading cue strategies of better and poorer readers. *Reading Research and Instruction*, Spring 1988, *27*(3), 35-50.

Studies the effect of reading ability on oral reading strategies. The sample consisted of 122 fourth grade pupils, one-half classified as below grade level in reading ability and one-half classified as above grade level. Children tape-recorded their oral reading of a 927-word story. The story was divided into six parts, each part progressing in readability from grade one to grade six. Miscues selected from low, moderate, and high levels of difficulty were analyzed for graphic similarity and contextual appropriateness. Significant differences were found in the strategies used by good and poor readers. At the low level of difficulty, both groups focused strongly on semantic information but the poor readers relied more heavily than the good readers on graphic information. No significant differences were found for the moderate level of difficulty. The greatest differences were found at the high level of difficulty where good readers shifted their attention to graphic cues while continuing to rely on contextual information but poor readers resorted to graphic cues at the expense of meaning.

Bristow, Page Simpson, & Leslie, Lauren. Indicators of reading difficulty: Discrimination between instructional- and frustration-range performance of functionally illiterate adults. *Reading Research Quarterly*, Spring 1988, *23*, 200-218.

Examines the validity of selected indicators of difficulty for illiterate adults. A sample of 81 students from a volunteer literacy program, all reading below the sixth-grade level, participated in the study. Subjects were asked to read four passages of increasing difficulty. Data were collected on oral reading accuracy, rate, comprehension, a subjective rating of difficulty, miscue quality, and number of self-corrections. A free-association task was used to control for differences in prior knowledge. It was found that oral reading accuracy and comprehension were the best indicators of difficulty. Reading rate was also a strong indicator of difficulty, outperforming accuracy and comprehension in some situations.

Bruder, Mary Newton, & Biggs, Shirley A. Oral reading and adult poor readers: Implications for practice. *Journal of Reading*, May 1988, *31*, 736-739.

Interviews 125 adults enrolled in a literacy development class about their recall and reaction to reading aloud in school. Only 9 did not recall reading orally in school while 70 described it as a negative experience. Of the 35 better readers (grade level 9.0+ on unnamed reading tests), 25 reported negative memories of oral reading; about half of the poorest readers (grade level 0-4.9) reported negative memories. Younger age groups (18-30 years and 31-40) reflected recall patterns similar to the total group. Of the 13 subjects ages 41 and up, 8 recalled oral reading as a positive experience and 5 as a negative experience. Patterns for males and females were similar. However, differences were seen between blacks and whites in the sample, with a greater proportion of whites recalling negative experiences.

Fagan, William T. Adult illiterates processing narrative and expository text. *English Quarterly*, Summer 1987, *20*, 95-105.

Studies and compares the processing behavior of 20 adults in narrative and expository texts at both instructional and frustration levels of difficulty. The reading achievement level of subjects ranged from primer to grade 3.5 level on the *Standard Reading Inventory*; their ages ranged from 21 to 60 years. Passages in narrative materials ranged from preprimer to sixth grade level in difficulty; for expository materials, difficulty levels ranged from preprimer to tenth grade. Subjects read orally and processes analyzed were: attending, analyzing, symbol-sound associating, predicting, synthesizing, and monitoring. Generally, findings indicated more instances of differentiation between narrative and expository text than between levels of difficulty. When reading narrative text, readers engaged more in processes related to meaning construction. Even when at frustration level, readers were successful in providing a meaning synthesis for the text. Readers tended to attend more to initial graphemes of words and used more graphophonic knowledge in expository text. Medial and final letter cues were used more often when text was narrative and at instructional level or in expository text at frustration level. When narrative text became more difficult, subjects resorted to a larger grapheme unit, syllables, to process the text. Readers did not differentiate the nature and degree of overt monitoring across text type and difficulty levels.

Duchin, Sandra W., & Mysak, Edward D. Disfluency and rate characteristics of young adult, middle-aged, and older males. *Journal of Communication Disorders*, June 1987, *20*, 245-257.

Reports on the disfluency and rate characteristics of a young adult group (21-30 years), two groups of middle-aged (45-54 and 55-64 years, respectively), and two groups of older males (65-74 and 75-91 years, respectively). Two rate and seven disfluency measures were collected during oral reading, picture description, and conversational speech. The total population numbered 75 white males on whom the following data were obtained in sequence: (1) Audiometric Screening, (2) the Physical Health Questionnaire, and (3) Speaking Samples secured on oral reading, description of pictures, and conversation. Verbatim transcriptions of audiotape recordings were provided for the oral reading samples, descriptions, and speech samples. Speaking rate was calculated through two measures: syllables per second and words per minute. Disfluencies were noted by employing a classification system consisting of interjections, revision–incomplete phrase, word repetitions, part-word repetitions, phrase repetitions, disrhythmic phonations, and tense pause. Findings revealed that speech rate during each of the speaking tasks differed significantly among young, middle-aged, and older males, with the young males speaking at a faster rate than the other groups, and all groups speaking at a faster rate than Elder II. Speech rate differed significantly, in decreasing order, for oral reading, conversation, and description, irrespective of age. Levels of disfluency did not differ among the various age groups.

SULLIVAN, JOANNA. Differences in the oral reading performance of English and Spanish speaking pupils from the United States and Venezuela. *Journal of Research and Development in Education*, Summer 1986, *19*, 68-73.

Compares the oral reading ability of Spanish speaking and English speaking children using their native languages. Forty-five American pupils were matched with 45 Venezuelan pupils on age, grade level, and reading achievement. For each language group, 15 children each were selected from grades one through three. All pupils were administered an Informal Reading Inventory (IRI). The English children received the *Gray Oral Reading Test* and the Spanish students took the *La Prueba de la Lectura Oral*. The IRI's were similar in vocabulary control, sentence length, and passage length. Oral reading errors were analyzed using miscue analysis procedures. Results showed that Spanish speaking pupils produced a greater proportion of errors than English speaking children at grade two. At grade one, English speaking children made significantly more contextually correct miscues than their Spanish counterparts. In general, English speaking children used initial letter clues as a primary strategy in identifying unknown words whereas Spanish speakers relied more heavily upon medial vowels.

MIRAMONTES, OFELIA. Oral reading miscues of Hispanic students: Implications for assessment of learning disabilities. *Journal of Learning Disabilities*, December 1987, *20*, 627-632.

Compares patterns of oral reading miscues made by four groups of Hispanic readers: good readers-Spanish (GS), good readers-English (GE), learning disabled-Spanish (LDS), and learning disabled-English (LDE). Subjects were 40 Hispanic fourth-, fifth-, and sixth-grade pupils from four schools. The 10 GS and 10 GE readers were selected from the most successful Spanish or English readers at their grade level based on test scores and teacher recommendation. Subjects read an unfamiliar basal reader selection approximately one grade level above their school reading level and were asked to retell it. Oral reading miscues were analyzed into the five categories: graphic similarity, sound similarity, grammatical function, comprehension, and grammatical relationships. Miscues of the GS and LDS groups differed significantly from the GE and LDE groups in all categories when analyzed in the pupils' first reading language and in the last three categories when analyzed for English reading. Spanish readers' miscues closely approximated the text more often than did those of English readers. GS readers consistently used decoding skills with greater adherence to the text than did GE readers; they did so in reading both in English and in Spanish.

MUDD, NORMA. Strategies used in the early stages of learning to read: A comparison of children and adults. *Educational Research*, June 1987, *29*, 83-94.

Investigates and compares strategies used by children and adults in the early stages of learning to read. Included were 72 adults, aged 19 to 45, and 96 children, aged 7-0 to 7-11. Reading ages of all subjects ranged from 7-0 to 7-11 on the *Schonell Reading Test*. Subjects read two passages orally, one with an adult orientation and one having more child appeal. Prior to reading one of the passages, subjects were given a brief preview of the content; the other passage was read with no preview. Readings were taped and timed, and comprehension assessed by oral questions. Miscues were analyzed for phonological-graphical and syntactic-semantic constraints. Utilizing analysis of variance, it was found that adults did not necessarily make more use of semantic cues than children. General strategies used by adults were similar to those used by the less able child readers. The adult oriented passage revealed more semantically constrained miscues among adults, whereas children made more semantically constrained miscues on the child-appeal passage.

PERKINS, VICTORIA L. Feedback effects on oral reading errors of children with learning disabilities. *Journal of Learning Disabilities*, April 1988, *21*, 244-248.

Manipulates four feedback procedures on the oral reading errors of children with learning disabilities (LD): (a) general, (b) corrective/modeling, (c) corrective/sound-it-out, and (d) no feedback. The 48 boys in grades 1 to 4 were assigned randomly to the four treatment conditions. Materials consisted of 10 consonant-vowel-consonant nonsense trigrams for the experimental list and 10 transfer trigrams. Subjects read each experimental trigram, and it was recorded as correct or incorrect. If correct, the subject was told to read it again; if incorrect, the feedback treatment condition was provided and the boy asked to read the word again. Again it was scored as correct or incorrect. A transfer list posttest immediately followed the experimental words. No feedback was given on the transfer list. One week later, children read each trigram once to assess maintenence. Subjects who received the modeling feedback averaged the highest mean scores with sound-it-out feedback producing the second highest mean scores. At the one week posttest, modeling and sound-it-out scored higher than the other two feedback conditions.

SAMPSON, MICHAEL R.; BRIGGS, L.D.; & WHITE, JANE H. Student authorship and reading: The joy of literacy. *Reading Improvement*, Spring 1985, *25*, 82-84.

Examines and compares the miscues and comprehension of first graders reading two types of materials, basal and pupil-authored. The nine first-grade children were reading at the second preprimer level. Each child dictated a story on the first of three visits. In the next two visits, each child read orally a basal reader story and his/her own dictated story. A miscue analysis procedure was used to analyze the oral reading. Retellings were analyzed also. Basal-reader story miscues were semantically and syntactically acceptable at the sentence level but were coupled with meaning change. Pupil-dictated story miscues indicated interrelationships which showed little meaning change and no loss in comprehension. A higher percentage of recalled events was found for pupil-dictated than for basal stories.

IV-12 Rate of reading

CRONAN, THERESA H. Reading rate: The measurement dilemma revisited. *Forum for Reading*, Fall/Winter 1987, *19*, 31-37.

Assesses the effects of two reading rate measurement techniques on rate and comprehension of 173 college freshmen. A passage-completion measure and a one-minute time limit measure were the two techniques utilized. Two equivalent passages were read. Words per minute, comprehension, and a reading efficiency score were all determined. Subjects also were asked to indicate which technique they felt gave a better measure of their rate and which should be used in tests of reading rate. Scores were analyzed for the total group and for subgroups of those who scored 75% or better on comprehension on the passage-completion, on the one-minute timed reading, and on both. While rate scores were slightly higher for the time-limit measure than for the passage completion measure, there were no differences in comprehension scores for the total group. Rate scores did not vary greatly by technique within each subgroup. In the total group, 53% preferred the completion over the time-limit exercise, and 55% recommended the passage-completion technique for use in reading rate tests.

Ferraro, F. Richard. Faster reading, but do they know what they've read?: A note of caution. *Perceptual and Motor Skills*, August 1987, *65*, 194.

Questions a 1984 study claiming that the use of close-set type showed promise for increased legibility under some conditions. the author notes that no assessment of text comprehension was included and warns that a variety of performance measures need to be taken into account. Also referred to is a previous report of two readers whose rates averaged 27,000 words per minute but whose average comprehension score was under 14%.

Mancil, Gary L., & Nowakowski, Rod. Evaluation of reading speed with four low vision aids. *American Journal of Optometry & Psysiological Optics*, September 1986, *63*, 708-713.

Assesses the maximum reading speed of 40 normally sighted young adults enrolled as optometry students in a southeastern university. Subjects were of similar educational background and were tested under similar clinical settings. All were tested with four aids commonly used for low vision patients: 1) a +16.00 D AOlite microscope used monocularly over a clinically emmetropic eye; 2) a +16.00 D coil hand-held magnifier used monocularly with a clinically emmetropic eye; 3) a 4x Walters focusable monocular, mounted mocularly either in the Walters flip-up frame before a clinically emmetropic eye or over habitual spectacle correction using the Walters clip-on attachment; and 4) a +28.00 D coil stand magnifier used monocularly with a clinically emmetropic, nonpresbyopic eye. Subjects read Science Research Associates standardized reading cards of 1.25 M print size, using each of the four low vision aids for two minute periods. An addition timing of words read using only the habitual correction was taken. Words per minute and reading comprehension scores were calculated. Ranked from best to worst for maximum reading speed were the microscope (63% of normal speed), the hand-held magnifier (59%), the focusable monocular (46%), and the stand magnifier (29%). Reading speed with habitual correction was the best predictor of reading speed with stand magnifiers, followed by, in order, hand magnifiers, microscopes, and the focusable telescope. Differences in habitual compared with low vision aid reading speed were significant ($p < .0001$).

Gould, John D.; Alfaro, Lizette; Barnes, Vincent; Finn, Rich; Grischkowsky, Nancy; & Minuto, Angela. Reading is slower from CRT displays than from paper: Attempts to isolate a single-variable explanation. *Human Factors*, June 1987, *29*, 269-299.

Summarizes a series of 10 experiments designed to explain why individuals read more slowly from cathode ray tube (CRT) displays than from paper. Each experiment studied one variable in an effort to determine whether or not it accounted for most of the reading speed difference. No one variable appeared to do so. The authors tentatively conclude that the difference is due to a combination of several variables, with the image quality of the characters, as opposed to task or user variables, probably accounting for the difference.

Faubert, Jocelyn, & Overbury, Olga. Active-passive paradigm in assessing CCTV-aided reading. *American Journal of Optometry & Physiological Optics*, January 1987, *64*, 23-28.

Compares active, passive, and control conditions in learning to use the closed circuit television system (CCTV) as an aid in increasing reading speed. Subjects were six male and seven female university students with corrected vision of 20/20. Rate was checked with the CCTV prior to training and again following training. Subjects were assigned randomly into active, passive, and control groups. Active and passive groups were trained in pairs with the active subject moving the reading material on the CCTV while the passive subject remained immobile during reading. Subjects read fastest in the active condition and performed better in the passive as opposed to the control condition.

Levy, Betty Ann; Newell, Susan; Snyder, Judy; & Timmins, Kurt. Processing changes across reading encounters. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, October 1986, *12*, 467-478.

Examines, in five experiments, the effect of familiarity on speed and accuracy of reading. All subjects were undergraduate students, who numbered 24 in three experiments, and 40 in the other two. In Experiment 1, subjects were asked to proofread eight passages, each having five versions. Versions differed in the 24 words that were misspelled in each. There were four experimental conditions that differed in terms of familiarization. In two conditions, subjects proofed each passage five times in succession: (1) same-error condition in which the repeated proofing was all on the same passage, and (2) different-error condition in which the repeated proofing was on the five different-error versions for that passage. In the third condition (prior-familiarity), students read aloud an error-free version of the passage three times prior to proofreading the passage; in the fourth condition, passages were proofread only once with no previous experience with the text. Each condition was tested by two passages for each subject. Reading rate increased systematically across encounters, with no loss in the extensiveness of analyses of the printed text as indicated by the ability to detect errors. Experiment 2 indicated that improved fluency occurred even with typescript changes across trials, thereby indicating that a primed visual operations explanation could not account for the effect. The next two experiments extended the study of the familiarity effect to higher level processing, as indicated by the detection of word errors. Familiarity facilitated the detection of these violations at the syntactic-semantic levels. Experiment 5 indicated that these higher level violations continued to be detected over a series of reading encounters with the same text. It was concluded that prior experience improves reading rate, with no attenuation of analysis of the printed words or of the text message.

Kobasigawa, Akira; LaCasse, Martha A.; & MacDonald, Vincent A. Use of headings by children for text search. *Canadian Journal of Behavioural Science*, January 1988, *20*, 50-63.

Asks whether children spontaneously make use of available text headings or if they can be directed to do so. Also studied is whether children's rates vary for two specific purposes. Participants were 48 children each in grades 4, 6, and 8 who were randomly assigned to a heading group in which headings were embedded in reading material or to a no heading group. Five factual passages were presented. The first passage or booklet was used to obtain a baseline measure of reading rate for reading every word. The remaining four booklets each had two search questions, the first requesting specific information appearing on page two at the 289th word position of the 350-word passages. The answer to the second question for booklets 2, 4, and 5 was located at the 108th word position on the first page. Booklet 3 was used as a filler to prevent response set, and the target answers appeared in different positions from those in the other booklets. In the second phase of the study, children were directed to find just one thing and underline the target sentence. They then were given the second search question. In Phase 3, children were asked to verbalize their procedures. In Booklet 5, children were told to find the answers by using the headings. Amount of time for reading the first page of the booklets was compared with the baseline time. Spontaneous use of headings was observed in about half of fourth and sixth graders and in a majority of eighth graders. Significantly more grade 4 than grade 8 pupils failed to benefit from the headings, and their search times were comparable to those in the no heading group. Children at all grade levels had faster times when asked to search for a specific fact than when asked to read the story word-for-word.

Naveh-Benjamin, Moshe, & Ayres, Thomas J. Digit span, reading rate, and linguistic relativity. *Quarterly Journal of Experimental Psychology*, November 1986, *38A*, 739-751.

Examines the relation between reading rate and memory in four languages. The study grew out of a theory of linguistic relativity that suggests a relation between surface-structure features of language and cognitive processing. Subjects were 112 adult, native speakers of English, Spanish, Hebrew, and Arabic. Each subject received tests of digit memory span, speeded reading rate for digits, and normal reading rate for a story in his/her native language. The results of all three measures revealed a significant effect for language, with English the highest and Arabic the lowest. The data were also analyzed in terms of the number of syllables and number of phonemes per language unit. The relation between unit length in a language and both reading rate and memory span appeared linear for the languages tested; the average size in syllables or phonemes of a meaningful unit was inversely related to reading rate and to memory span. These results suggest that the within-language word length effect found in previous studies also applies across languages.

IV-13 Other factors related to reading

Entwisle, Doris R., & Alexander, Karl L. Factors affecting achievement test scores and marks of black and white first graders. *Elementary School Journal*, May 1988, *88*, 449-471.

Follows a group of first graders: (1) to examine whether cognitive growth in first grade as assessed by teachers' marks is affected by the same factors as those gauged by the *California Achievement Test* (CAT); and (2) to study differences in attainment between black and white children. Included were 585 pupils who were promoted at the end of first grade and whose parents and teachers provided data through interviews and self-administered questionnaires. Both parents and children were interviewed early in first grade to determine their performance expectations. Children were again interviewed in the spring. Teachers rated children in terms of popularity and also answered 14 personal maturity questions about each child. School records were used to collect information on school marks, absences, special problems, and CAT scores. At the beginning of the school year, black and white children had equivalent verbal CAT scores (phonic analysis, vocabulary, comprehension, and language) and scores differed by five points on the math (computation and concepts). Parents' educational level and pupils' absentee rates were nearly identical. By spring, white children scored six points higher in verbal and nine points higher in math CAT scores. School marks in reading, math, and conduct favored white pupils beginning in the first marking quarter. Conduct marks for white pupils were positively related to grades in reading and math as well as to CAT scores. However, conduct marks of black children were positively related to both reading and math marks but negatively related to CAT score gains.

Fredericks, Anthony D., & Rasinski, Timothy V. Parent preferences for information in reading. *California Reader*, January/February 1988, *21*(2), 20-23.

Submits a questionnaire survey to parents in one K-5 elementary school asking them to rank order their information needs on a list of 17 items. Of the surveys distributed, 71.3% were returned. The three topics receiving the highest ratings were development of comprehension skills, motivating children to read, and developing positive attitudes toward reading. When results were analyzed for differences between responses of parents with children in K-1 and those with children in grades 4-5, it was found that parents of older pupils were more concerned with specific reading issues such as vocabulary, comprehension, and motivation and less concerned with general issues such as how reading is taught. Several activities often promoted by educators (reading to children, providing books and magazines) tended to be ranked low by parents.

GOLDFIELD, BEVERLY A., & SNOW, CATHERINE E. Reading books with children: The mechanics of parental influence on children's reading achievement. In James Flood (Ed.) *Promoting Reading Comprehension*. Newark, DE: International Reading Association, 1984, 204-215.

Reviews selected evidence from correlational and experimental studies related to the effect of parents' reading to children on later reading achievement. Several reports delineating the learnings derived from parents reading to a preschool child are also reviewed. The latter comes primarily from observational studies. The authors conclude that the literature is supportive of efforts by parents to read to their preschoolers.

BLOOME, DAVID. Reading as a social process in a middle school classroom. In David Bloome (Ed.) *Literacy and Schooling*. Norwood, NJ: Ablex Publishing Corporation, 1987, 123-149.

Includes data from an intensive ethnographic study of 8 eighth graders, 4 males and 4 females, as they studied a short story. The study took place in a low-track, urban middle school classroom. Examples of teacher-pupil interaction and pupil writing are presented. Recurrent patterns in this as well as other lessons were text reproduction, cataloguing, procedural display, and a passive stance toward text.

FAGAN, WILLIAM T., & HAYDEN, HELEN RUTH. Parent-child interaction in favorite and unfamiliar stories. *Reading Research and Instruction*, Winter 1988, *27*(2), 47-55.

Explores the interactive behaviors of mothers and fathers with their children as they read favorite (familiar) and unfamiliar stories. A random sample of 27 kindergarten children, 20 fathers, and 20 mothers was selected. Each parent read and tape-recorded a familiar story chosen by the child and an unfamiliar story chosen by the researchers. The recordings were transcribed and analyzed into topic units (units of thought which dealt with a subject or topic) and message units (single meaningful statements or questions). An analysis of the results found no significant difference between fathers and mothers in the nature of their request or response strategies. Likewise, the children's request and response strategies did not differ regardless of whether the reader was a mother or father. However, a significant difference was found in the strategies used by parents and children between familiar and unfamiliar books. In unfamiliar texts, parents exhibited more confirmation strategies, but, in familiar texts, they exhibited more prediction strategies and engaged the children in various aspects of the code.

ZUELKE, DENNIS C. Attitude, cost and school effects on sixth-grade achievement. *Education*, Summer 1986, *106*, 394-408.

Attempts to design a model for decision-making based upon the relation between human and material resources and achievement. The study focused on sixth-grade pupils in one suburban elementary school district. Data on 122 variables were collected from the following categories: socioeconomic characteristics, peer characteristics, teacher variables, classroom budget/inventory cost variables, and achievement/attitude variables. Some of the data were collected through school records, other were obtained through classroom observations. A series of multiple regression analyses were conducted to determine the relative effects of human and material resources on achievement. It was found that prior learning accounted for nearly 69% of the variance for reading achievement and 52% for mathematics achievement. Socioeconomic and peer variables each accounted for less than 1% of the variance for reading achievement. Teacher variables and cost variables also accounted for only a very small share of reading achievement variance.

IV-14 Factors related to reading disability

VELLUTINO, FRANK R. Dyslexia. *Scientific American*, March 1987, *256*(3), 34-41.

Assesses various theories of dyslexia and reviews related research. The author challenges the position that dyslexia stems primarily from visual deficits. The research reviewed supports the finding that dyslexia is a subtle language deficiency with roots in several areas: phonological-coding deficits, deficient phonemic segmentation, poor vocabulary development, and difficulty discriminating grammatical and syntactic differences among words and sentences. Included in the review are studies inquiring into a genetic and/or neurological basis for dyslexia. Some support is cited for both.

DEWITZ, PETER. Beyond the deficit model of reading disabilities. In Malcolm P. Douglass (Ed.) *Claremont Reading Conference Fiftieth Yearbook*, 1986, 209-222.

Includes research, especially case studies, in attempting to come to a new description of remedial reading instruction. Argues for the need to go beyond a simple skills deficit model and posits a complex view of reading disorders which includes attitudes and attributions.

SHARE, DAVID L., & SILVA, PHIL A. The stability and classification of specific reading retardation: A longitudinal study from age 7 to 11. *British Journal of Educational Psychology*, February 1986, *56*, 32-39.

Investigates the assumption that reading retardation in underachieving children is not age or test-specific. Subjects were approximately 900 New Zealand children enrolled in a longitudinal study, who were first tested at age 3, and then at ages 5, 7, 9, and 11. The sample was mainly of European origin, with about 2% from Maori and Polynesian background. Word recognition was tested at ages 7, 9, and 11 with the *Burt Word Reading Test*. Intelligence was tested at 7, 9, and 11 with the WISC-R. These data were available for 616 children. At age 11, scores on the *Progressive Achievement Tests*, Reading Comprehension and Vocabulary subtests, were also available. Children in the bottom 5% of each age group were designated as being reading retarded, yielding a group of 44 at each age. Of the 44 classified as reading retarded at age 7, 25 were reclassified as reading retarded either two or four years later, or both. Thirty-three of the group classified at 9 were classified as retarded either two years earlier, two years later, or both. At 11, 28 out of 44 had previously been classified as reading retarded. The authors conclude that classification is not age specific. Subsequent data analysis suggested that classifications were stable across tests, although there was less agreement between classifications based on reading comprehension and word recognition than between the two measures of word recognition.

DALBY, J. THOMAS. When are subtypes of developmental reading disorders first detected? *Reading Improvement*, Summer 1987, *24*, 144-145.

Seeks to determine if particular subtypes of a reading disorder are identified with others due to a discordance between neurocognitive traits and the changing demands presented by the learning situation. Reading disabled boys attending remedial classes in a Canadian public school were subjects in the study. Criteria for entering their educational placement situation included being enrolled in grades 2-9, a full-scale IQ of 90 or above, and a current reading achievement of at least one and one-half years below grade placement. Subjects were administered the *Denver Reading and Spelling Test*. School records were reviewed on participants, and dates recorded on psychoeducational assessments. Children having developmental reading disorders were subtyped on the basis of a classification scheme which qualitatively assessed their abilities to use phonetic and whole word processing skills. Dysphonetic children were referred and diagnosed significantly earlier than other types of reading dysfunction. The author noted that age may play a significant role in the proportional composition of types of reading disorder both in research and clinical populations.

MORRIS, ROBIN; BLASHFIELD, ROGER; & SATZ, PAUL. Developmental classification of reading-disabled children. *Journal of Clinical and Experimental Neuropsychology*, 1986, *8*(4), 371-392.

Addresses a three-fold purpose: 1) to classify reading disabled and non-reading-disabled children into separate groups based on nonexclusionary criteria using multivariate statistical classification techniques; 2) to classify reading disabled subgroups into developmentally different subtypes; and 3) to validate results by showing that the subtypes classified are different on other measures and behaviors. Using data collected from the Florida Longitudinal Project, which gathered neuropsychological, cognitive, neurological, family, academic, and behavioral data on samples of children over a nine-year period, samples were taken from 200 nonclinical normal and reading disabled males at kindergarten, second, and fifth grades. Data were cluster-analyzed, using longitudinal clustering methods. Partitions from the clustering step were subjected to internal validation procedures, including comparisons across methods, a split-half method, and Monte Carlo tests of the null hypothesis that no clusters existed within the data. Partitions which were internally validated were compared for differences between clusters across nine domains of variables not used in the classification phase. Five developmental subtypes were found, two normal and three deficit groups. Groups differed on the domains of academic achievement, parental achievement, neurological status, birth histories, school behaviors, and neuropsychological-cognitive development. Detailed examinations of the various groups are included.

SINGLETON, C.H. The early diagnosis of developmental dyslexia. *Support for Learning*, May 1988, *3*, 108-121.

Reviews current evidence on early identification and diagnosis of developmental dyslexia. It is concluded that evidence points to dyslexics having some fundamental impairment in the cognitive systems which subserve phonological processing and sequential memory. Because these skills can be assessed prior to children's beginning to learn to read, it is felt that they hold the promise of an independent method of diagnosing dyslexia in young children. It is contended that deficits in phonological processing amy arise because of sequential memory dysfunction. Noted, too, is that tests of phonological processing and sequential memory need to be validated as predictive measures of dyslexia. In addition, these tests will need to be more intensive and sensitive to cognitive dysfunctioning rather than merely reflective of a lack of experience.

SNOWLING, MAGGIE; STACKHOUSE, JOY; & RACK, JOHN. Phonological dyslexia and dysgraphia—a developmental analysis. *Cognitive Neuropsychology*, 1986, *3*(3), 309-339.

Presents data from seven developmental dyslexics who exhibited a profile of abilities described as phonological dyslexia. All subjects had been referred for assessment of reading and spelling difficulties. Six subjects were children, ranging in age from 8 to 13 years; one was an adult, aged 40. WISC-R scores were available for five of the children and ranged from 85 to 133. Reading Age (RA) on the *Schonell Graded Word Reading Test* ranged from 6-11 to 12 for the children; RA for the adult was 10-6. Spelling age, also on the Schonell, ranged from 6-1 to 11. Tests of reading, spelling, and auditory processing indicated a range of phonological deficits when compared with normal readers matched for RA. Variability within the dyslexic group was regarded as highlighting the difficulties for classification as phonological dyslexics. The authors contend that a more useful approach would be to consider the readers' difficulties within a developmental framework in which phonological deficits hinder and may alter the course of literacy development.

LEBRUN, Y. Dyslexia in left-handers. In D. Bakker; C. Wilsher; H. Debruyne; & N. Bertin (Eds.) *Developmental Dyslexia and Learning Disorders*. Basel, Switzerland: S. Karger, 1987, 148-156.

Argues for determining the preferred direction of writing and scanning when assessing a dyslexic left-handed child. Information from several previously reported case studies and from well known left-handed individuals is used to support the argument that improvement in reading and writing may result if such a child is allowed to hold the book upside down and to produce inverted mirror-writing.

BROMAN, SARAH; BIEN, ELLEN; & SHAUGHNESSY, PETER. *Low Achieving Children: The First Seven Years*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc., 1985.

Presents the second major report on the intellectual development of about 1,000 children followed since birth, tested at age 7, and identified as having normal intelligence but showing poor academic performance. A group of 6,000 children with normal school performance was used for comparison purposes in order to evaluate the contribution of perinatal conditions, preschool behavior, and the effect of the social environment on problems of learning, reading, and hyperactivity. Academic performance was determined by scores on the reading or spelling subtest of the *Wide Range Achievement Test* (WRAT). The two groups were compared on 391 characteristics derived from examinations and interviews conducted for the project. At age 7 children were given the WISC, the Goodenough-Harris *Draw-a-Person Test*, the *Bender-Gestalt Test*, the Auditory Vocal Association Test from the *Illinois Test of Psycholinguistic Abilities*, the *Tactile Finger Recognition Test*, and the WRAT. Analyses were performed separately for blacks and whites. A subgroup of poor readers was compared with controls matched on socioeconomic status, ethnic group, sex, IQ, and institution or study center. Related to higher rates of academic failure were lower socioeconomic status, less maternal education, higher birth order, and larger family size. Extensive and detailed information is presented in the text.

ELLIS, NICK, & LARGE, BARBARA. The development of reading: As you seek so shall you find. *British Journal of Psychology*, February 1987, *78*, 1-28.

Concentrates on the development in reading of three groups of British children from ages five to eight: a specific reading disability group with high IQ and low reading scores (Group A), a group of good readers with high IQ (Group B), and a group of general reading retardates with low IQ (Group C). Children were initially assessed in their first year of school about age five and were seen afterwards at 12-month intervals at ages 6, 7, and 8. At age seven, 40 subjects remained, while there were 34 left at age eight. At age eight three groups of five children each were extracted on the basis of reading scores and IQ to constitute Groups A, B, and C. Tests administered included the *Schonell Reading Test*; the *Neale Analysis* of reading accuracy, comprehension, and rate; the WISC-R; and a battery of other measures consisting of spelling, vocabulary, short-term memory (STM), visual skills, auditory-visual integration, language knowledge, rote knowledge, and ordering ability. Groups A and B were matched for IQ, Groups A and C for reading scores. Group A children differed from Group B primarily with regard to STM, phonological segmentation, and naming. Group C children differed from Group B in 40 of the 44 variables, with the strong discriminators involving phonological processing. Group A children differed from Group C primarily in abilities involving visual processing.

Westman, Jack C.; Ownby, Raymond L.; & Smith, Suzanne. An analysis of 180 children referred to a university hospital learning disabilities service. *Child Psychology and Human Development*, Summer 1987, *17*, 275-282.

Analyzes the clinical records of 180 children (140 boys and 40 girls) who had been referred as having learning problems in order to determine parents' complaints, children's diagnoses and basic academic skill levels, and the treatment recommendations made. Subjects were between the ages of 6 and 18 and were evaluated through a 4 1/2 day inpatient or outpatient program utilizing the skills of a number of disciplines. Parents' primary complaints were 55% of a behavioral, 40% of an academic, and 5% of a medical symptom nature. In the realm of academic complaints, 36% were for reading problems and 25% for general underachievement. Diagnoses made in conformity with standards of the American Psychiatric Association indicated the following: (1) attention disorder-18%, (2) mental retardation-12%, (3) dysthymic disorder-10%, (4) conduct disorders-8%, (5) oppositional disorder-7%, (6) organic brain syndromes-6%, (7) overanxious disorder-3%, (8) childhood psychosis-3%, (9) adjustment disorder-2%, and (10) other syndromes-8%. Educational testing batteries (Reading, Spelling, and Arithmetic on the *Wide Range Achievement Test*) showed 60% were significantly retarded in reading, 72% in spelling, and 79% in arithmetic; 18% had average to superior academic skills. Of the total group, 79% received psychiatric clinical syndrome diagnoses, and 40% received personality and developmental disorder diagnoses. Only 23% needed special education class placement.

Pennington, Bruce F.; McCabe, Linda L.; Smith, Shelley D.; Lefly, Dianne L.; Bookman, Myra O.; Kimberling, William J.; & Lubs, Herbert A. Spelling errors in adults with a form of familial dyslexia. *Child Development*, August 1986, *57*, 1001-1013.

Designs a study to compare by computer program the spelling errors of three groups: (1) 24 adults with an apparent autosomal dominant form of dyslexia, (2) 17 of their normal adult relatives, and (3) 17 spelling-matched control children. A coding system was developed that independently evaluated both the phonological and orthographic accuracy of a spelling error at both simple and complex level. The system thus coded for simple phonological accuracy (SPA), complex phonological accuracy (CPA), simple orthographic accuracy (SOA), and complex orthographic accuracy (COA). Subjects were administered the Spelling subtest of the *Wide Range Achievement Test* II. Dyslexics as a group had qualitatively different overall error profiles from either of the other two groups. Dyslexics performed like the younger normal group on the CPA dimension but like the adult normals on the COA dimension. In dyslexics, the development of phonological accuracy, but not orthographic accuracy, has been delayed at about a fifth- or sixth-grade level. It is suggested that a somewhat different underlying cognitive process may support the two dimensions of spelling in both dyslexics and normals. The sample of dyslexics fits the subtype of dysphonetic or phonological dyslexia.

Ho, Hsiu-Zu, & Decker, Sadie N. Cognitive resemblance in reading disabled twins. *Developmental Medicine and Child Neurology*, February 1988, *30*, 99-107.

Examines the cognitive abilities of 60 pairs of reading disabled (RD) twins, ages 8 to 18. At least one twin in each pair had been diagnosed as RD. Included as subjects also were twin-pair controls, matched with respect to zygosity (monozygotic or dizygotic), age and sex. The battery of tests administered included the following subtests of the *Peabody Individual Achievement Test (PIAT):* Reading Recognition, Reading Comprehension, and Spelling. Additional measures were the Auditory Attention Span for Unrelated Words (SENT) and Auditory Attention Span for Unrelated syllables (WORDS) subtests of the *Detroit Test of Learning Aptitude (DTLA)*, the WISC-R or the WAIS-R Digit Span subtest, the WAIS-R

Digit Symbol subtest or the WISC-R Coding B subtest, the *Colorado Perceptual Speed* (CPS) Rotatable Letters and Numbers subtest, and the Revised CPS Test: Pronounceable Nonwords subtest. Principal components analysis of the tests yielded three composites of cognitive abilities: reading, symbol-processing speed, and sequential memory. Scores on each of these were significantly lower for the RD than for the normal readers. Individual differences in these cognitive composites within the RD twin sample were due to genetic differences. Deficits in the reading composite for the RD sample appeared to be heritable.

HO, HSIU-ZU; GILGER, JEFFREY W.; & DECKER, SADIE N. A twin study of Bannatyne's "genetic dyslexic" subtype. *Journal of Child Psychology and Psychiatry*, January 1988, *29*, 63-72.

Evaluates both the diagnostic utility and genetic antecedents of the Bannatyne profile of reading disability in a sample of 60 pairs of twins (30 monozygotic and 30 same-sexed dizygotic pairs), ages 3 to 18. At least one twin in each pair had been diagnosed as reading disabled (RD). A battery of tests was administered to the 60 RD twins and to a control group of 60 twin pairs. Included were: WISC-R or WAIS-R, three subtests of the *Peabody Individual Achievement Test*, the Spatial Relations subtest of the *Primary Mental Abilities Test*, the *Colorado Perceptual Speed Test*, the *Colorado Expressive Fluency Test*, and various subtests of the *Detroit Tests of Learning Aptitude*. Results of the analysis revealed that a greater proportion of the RD index cases (32%) than the non-RD sample (5%) demonstrated a spatial > conceptual > sequential pattern. Thus the proposed Bannatyne profile was found to discriminate between groups of disabled and normal readers.

SIVAN, ABIGAIL B.; BAYLESS, JOHN D.; & VARNEY, NILS R. Ideogram reading in normal and dyslexic children. *Cortex*, September 1986, *22*, 487-490.

Studies the ideogram reading performances of reading disabled and normal children. Involved were 21 reading disabled children, ages 8 to 13, and 53 controls, ages 3 to 8. All subjects were given an 18-item ideogram reading test. Ideogram reading was found to develop slowly in the normals with only 7- and 8-year-olds performing like normal adults.

FLETCHER, JACK M. Memory for verbal and nonverbal stimuli in learning disability subgroups: Analysis by selected reminding. *Journal of Experimental Child Psychology*, October 1985, *40*, 244-259.

Tests the hypothesis that subgroups of disabled learners show different performance patterns on analogous verbal and nonverbal memory tasks. Disabled learners were placed into one of four categories based on their pattern of *Wide Range Achievement Test* scores: (1) reading-spelling disabled (R-S), (2) reading-spelling-arithmetic disabled (R-S-A), (3) spelling-arithmetic disabled (S-A), and (4) arithmetic-disabled (A). Sixteen controls were also included. Numbers of disabled learners ranged from 10 in the R-S and S-A groups to 38 in the R-S-A group. Mean ages for the disabled groups varied from 117 months to 120 months; mean Full Scale WISC-R IQs ranged from 95.2 to 98.5. Subjects received a verbal free-list learning task and a non-verbal analog. The verbal task consisted of 12 animal names read to a child for a maximum of eight trials. The nonverbal task consisted of a series of squares each containing five randomly arranged black dots. For each of eight trials, the examiner pointed to a target dot to be remembered in each square. Both tasks were discontinued with two successive recalls of all items. Relative to controls, A and S-A children had significantly lower storage and retrieval scores on the nonverbal task, but did not differ on the verbal task; R-S children differed only on retrieval scores from the verbal task; R-S-A subjects differed on retrieval scores on the verbal task and on storage and retrieval scores on the nonverbal task. Results suggested that memory performance of disabled learners differed according to the type of learning problem, the nature of the stimuli, and the aspect of memory being assessed.

Bowers, Patricia G.; Steffy, Richard A.; & Swanson, Lynn B. Naming speed, memory, and visual processing in reading disability. *Canadian Journal of Behavioral Science*, July 1986, *18*, 209-223.

Researches the role of naming speed, short-term memory, and speed of visual processing in reading disability. Subjects were 39 children, ages 7 to 15 years, who had been referred to a clinic for assessment of neuropsychological and attentional functions. WISC-R IQs were at least 80. Abilities assessed included: Reading ability – the Word Attack, Letter-Word Identification, and Passage Comprehension subtests of the *Woodcock-Johnson Tests of Psycho-Educational Achievement*; Naming speed – digit naming speed and color naming speed; Auditory short-term serial memory accuracy – auditory memory for sentences from a subtest of the *Detroit Tests of Learning Aptitude*, and the Digit Span subtest of the WISC-R; and Visual information processing – the *Span of Apprehension Test*. Control variables were age, IQ, and general attentiveness. Regression analyses results indicated that naming speed contributed unique variance to all reading subtests, and that its contribution to the Word Attack subtest was especially strong. The variance shared by auditory memory and Word Attack was fully attributable to naming speed. Visual processing speed contributed to Word Attack partly through variance shared with naming speed and partly through unique variance.

Mastropieri, Margo A.; Scruggs, Thomas E.; & Levin, Joel R. Learning-disabled students' memory for expository prose: Mnemonic versus nonmnemonic pictures. *American Educational Research Journal*, Winter 1987, *24*, 505-519.

Studies the effect of mnemonic versus nonmnemonic pictures on recall of prose by learning disabled (LD) adolescents. The 67 LD subjects were in grades 7, 8, and 9; had a mean WISC-R IQ of 96, and a mean grade-equivalent reading score of 5.1 on the *Woodcock-Johnson Psycho-educational Battery*. Materials consisted of a passage containing a list of nine reasons for dinosaur extinction, given in decreasing order of plausibility. Passage booklets were presented in three conditions: mnemonic pictures, nonmnemonic pictures, and no-picture control. Subjects read the passage in one of the conditions and took two criterion tests, a reason-recall test and a plausibility-identification test. Both picture conditions facilitated free recall of the reasons for extinction. Only mnemonic pictures facilitated recall of the reasons in conjunction with their plausibility numbers. Neither picture condition facilitated recall of additional, unpictured information from the passage.

Feldt, Ronald C., & Witte, Kenneth L. Metamemorial knowledge of good and poor readers: A developmental perspective. *Journal of Genetic Psychology*, December 1987, *148*, 415-426.

Compares the metamemory of good and poor readers from a developmental perspective. Subjects were second-, third-, and fifth-grade good readers and third- and fifth-grade poor readers. Each subject was tested individually by using five memory ability questions and a series of nonverbal ranking tasks. The testing stimuli (stimulus sets) were manipulated so as to examine four metamemory variables: number, category, time, and strategy. Results of chi square analysis of the memory ability questions indicated that poor readers exhibited a greater tendency to report that they do not remember well and that they do not remember as well as their friends do. An analysis of the results of the ranking tasks revealed significant effects for grade, stimulus set, and grade by stimulus set interaction. Although developmental patterns in metamemory were observed, there was little evidence that poor readers were delayed in metamemorial development.

Gildemeister, Joan, & Friedman, Philip. Sequence memory and organization in recall of black third and fifth graders. *Journal of Negro Education*, Spring 1986, *55*, 142-154.

Explores the relation between grade level and reading competence on black children's sequence memory and use of organization in recall. A sample of 32 third-grade and 32 fifth-grade black children from inner-city schools, stratified as high and low readers, was administered two memory tasks. The free recall task involved categorizing pictures to aid recall. The letter sequence task was scored for consistency with consideration of taxonomic and thematic basis. High readers performed significantly better on memory for sequence. However, evidence indicated that the task was equally difficult for third-grade good and fifth-grade poor readers. Free recall results revealed a developmental trend in the use of categories even through third graders organized recall by themes more often than fifth graders. Qualitative differences were observed among grade levels with the use of thematic organization related to a consistent strategy for third graders and a flexible one for fifth graders.

SHARE, DAVID L.; MOFFITT, TERRIE E.; & SILVA, PHIL A. Factors associated with arithmetic-and-reading disability and specific arithmetic disability. *Journal of Learning Disabilities*, May 1988, *21*, 313-320.

Examines factors associated with two types of arithmetic disability. Subjects were a group of New Zealand children followed and tested from birth through age 13. On the basis of achievement test scores at age 11, pupils were classified as arithmetic-and-reading disabled, specific arithmetic disabled, and nondisabled. Data from general measures of speech, language, intelligence, and motor development were used to characterize the students. Arithmetic-and-reading disabled boys showed deficits primarily on verbal tasks when compared to a nondisabled group. However, specific arithmetic disabled boys showed evidence of predominantly nonverbal deficits. The same crossover patterns were not observed in girls. Girls with arithmetic-and-reading disability revealed a general deficit (verbal and nonverbal), while girls with specific arithmetic disability did not differ from the control group.

STANOVICH, KEITH E.; NATHAN, RUTH G.; & ZOLMAN, JUDITH E. The developmental lag hypothesis in reading: Longitudinal and matched reading-level comparisons. *Child Development*, February 1988, *59*, 71-86.

Investigates the developmental lag hypothesis through a combination reading-level match design and longitudinal analysis. Groups of third-, fifth-, and seventh-grade children, matched on reading ability, were administered several measures of cognitive functioning and reading-specific subskills. Overall, the performance profiles of the three groups were remarkably similar in vocabulary, strategic and nonstrategic memory, rhyming ability, and word-recognition processes, thus supporting a developmental lag theory of reading problems. A follow-up analysis of a subsample of fifth- and seventh-grade pupils who had been tested two years previously, provided longitudinal comparisons that confirmed the predictive validity of the developmental lag model.

MELTZER, LYNN J.; RODITI, BETHANY N.; & FENTON, TERRENCE. Cognitive and learning profiles of delinquent and learning-disabled adolescents. *Adolescence*, Fall 1986, *21*, 581-591.

Compares the cognitive and learning profiles of 53 delinquent, 26 learning-disabled, and 50 average-achieving while males, ages 13 to 16. Educational and cognitive inventories were administered. The Educational Inventory included the *Spache Diagnostic Reading Scales*, an experimental edition of the *Survey of Educational Skills* for spelling and written expression, and the mathematics subtest of the *Wide Range Achievement Test*. A process-oriented approach that emphasized error analysis and the quality of learning style was used to assess the cognitive and learning profiles. An analysis of performance revealed specific and significant differences among the groups. In general, the delinquents exhibited the weakest educational skills but demonstrated patterns of performance similar to the learning-disabled students. Discriminant function analysis, using the educational and cognitive profiles, predicted the existence of learning disabilities more accurately than delinquency. However, about 14% of the delinquents exhibited a learning profile characteristic of learning-disabled subjects.

Goh, David S., & Wood, Joy M. Hanson. Development of conservation and academic achievement in learning disabled children. *Psychological Reports*, February 1987, *60*, 71-77.

Examines the development of conservation concepts in relation to the academic achievement of learning disabled (LD) children. Subjects were 23 LD and 24 normal children, ranging in age from 6-1 to 8-11. All subjects fell within the normal range in IQ as determined by the *Peabody Picture Vocabulary Test*. Children were individually administered the *Concept Assessment Kit*–Conservation, Forms A and C, and the *Peabody Individual Achievement Test* (PIAT), Mathematics and Reading Recognition subtests. At each age level (6, 7, and 8) LDs scored lower than normals on both conservation tasks except 8 year-olds on Form C. Normals scored higher than LDs on both PIAT subtests at all age levels. For LDs, coefficients of correlation for Form A of the conservation task were .80 with PIAT mathematics and .50 with PIAT reading recognition. With Form B, the respective coefficients were .69 and .55. Only one significant coefficient, .85 between the two PIAT subtests, was found for normals.

Elliott, Colin D., & Tyler, Stephen. Learning disabilities and intelligence test results: A principal components analysis of the British Ability Scales. *British Journal of Psychology*, August 1987, *78*, 325-333.

Explores the performance patterns of poor readers and dyslexics on the *British Ability Scales* (BAS). The sample consisted of a subset of poor readers (n=145) and a subset of dyslexic children (n=121) pulled from the BAS standardization sample. Principal component analysis was used to construct a model of intelligence. The two-factor solution produced a general factor that nearly all subtests loaded on, and a second, bipolar factor that discriminated along a verbal-nonverbal continuum. In general, poor readers scored lower on the verbal tests and higher on the non-verbal tests. The same pattern was observed for the dyslexics but was less consistent than that of the poor readers.

Sinatra, Richard. Styles of thinking and literacy proficiency for males disabled in print acquisition. *Reading Psychology*, 1988, *9*(1), 33-50.

Reports the results of a four-year longitudinal study of the mental processing and literacy patterns of 14 male disabled readers. Only subjects who met the following selected criteria were evaluated: male, right handed, diagnosed with WISC-R prior to age 16 and found average or better in either Verbal or Performance Scales, and severely disabled in reading or spelling or both. Over the course of the study, subjects were administered the WAIS, the *Wide Range Achievement Test*, the *Stanford Diagnostic Reading Test*, selected tests of the *Durrell Analysis of Reading Difficulties*, the test of *Space Thinking*, and a third-grade spelling list of 20 words. Test scores revealed that reading, spelling, and arithmetic improved no more than one grade level while intellectual capacity remained relatively stable. Performance on the Information and Vocabulary subtests of the WAIS decreased over time, but scores on the Similarities subtest increased. Spatial ability, as reflected by performance on subtests such as Picture Completion, Object Assembly and Block Design remained constant and significantly higher than acquired knowledge. The group as a whole demonstrated an ability to perceive a gestalt or relationship while capability with verbal language decreased.

Sinatra, Richard; Primavera, Louis; & Waked, William J. Learning style and intelligence of reading disabled students. *Perceptual and Motor Skills*, December 1986, *63*, 1243-1250.

Notes the relation between elements of the *Learning Style Inventory* (LSI) and scores on the WISC-R for 125 reading disabled subjects. Of the group, 99 were in grades 3-10 and 26 were in ungraded classrooms. Correlation coefficients between LSI and WISC-R Full Scale IQs, Verbal IQs, and Performance IQs all tended to be quite low.

Bow, James N. A comparison of intellectually superior male reading achievers and underachievers from a neuropsychological perspective. *Journal of Learning Disabilities*, February 1988, *21*, 118-123.

Examines the relation between reading achievement and neuropsychological deficits in intellectually superior males. A sample of 20 achievers and 20 underachievers were matched on age, socioeconomic status, medical history, and emotional problems. All subjects were intellectually superior males (IQ > 120) between 8 and 12 years of age. The boys were administered a comprehensive battery of neuropsychological tests. Achievers attained higher mean scores on every measure. A multiple linear regression procedure found that reading word recognition performance was significantly predicted by overall neuropsychological functioning with 46% of the word recognition variance accounted for by the nine neuropsychological tests. Specific comparisons between achievers and underachievers were done for WISC-R profiles, language functioning, auditory short-term memory, visual-spatial skills, directional orientation, lower level cerebral functioning, and familial/biological influences. Underachievers displayed impaired auditory sequencing skills, minor receptive language difficulties, significantly low scores on the Freedom from Distractibility factor on the WISC-R, and a verbal/performance IQ discrepancy.

Krein, Evelyn Leech, & Zaharias, Jane Ann. Analysis of able and disabled sixth-grade readers' knowledge of story structure: A comparison. *Reading Horizons*, Fall 1986, *27*, 45-53.

Compares able and disabled readers' ability to predict story outcomes, retell stories, and tell stories. A total of 46 sixth-grade pupils (23 able and 23 disabled readers) participated in the study. A 2 x 2 fixed effects research design was used in which sex was crossed with reading ability. Children were asked to retell a story read to them orally, predict the ending of a story read to them orally, and tell a story of their own choosing. Retellings were scored according to number of propositions recalled; predictions were scored as congruent or incongruent with the story; and story tellings were judged as elaborated or unelaborated. No significant difference was found for sex but able readers outperformed disabled readers on all three tasks.

August, Gerald J. Production deficiencies in free recall: A comparison of hyperactive, learning-disabled, and normal children. *Journal of Abnormal Child Psychology*, September 1987, *15*, 429-440.

Assesses whether hyperactive children show deficits in recall and organization relative to age-matched normal children and whether deficits could be overcome by a sorting presentation procedure. Subjects were 20 boys with Attention Deficit Disorder with Hyperactivity (Add-H), 15 boys with severe, specific reading disability but no behavior disorders, and 8 male siblings of the two groups who were selected as controls. Subjects were first presented with 24 words at a 3-second rate and asked to read each word aloud. Then subjects were told to sort the words, placing those together which had the same meaning or were alike in some way. Instructions were written to alert subjects to the strategy of semantic organization, but not to give explicit training in the strategy. There were five alternating sort-recall trials. When hyperactive students were given the semantic manipulation, item recall and organization improved so that recall performance was similar to performance of reading-disabled and normal children. No differences were found in sorting time among the groups.

SHARE, DAVID L.; SILVA, PHIL A.; & ADLER, CAROL J. Factors associated with reading plus-spelling retardation and specific spelling retardation. *Developmental Medicine and Child Neurology*, February 1987, *29*, 72-84.

Examines the nature of two types of spelling retardation, reading-plus-spelling retardation and specific spelling retardation. Subjects were 11-year-old New Zealand children who had been tested every two years since age three. A variety of data were collected from measures of language and speech development, social background and family characteristics, motor development, neurological assessment, and educational achievement. Subjects were classified into three groups: those exhibiting reading-plus-spelling retardation, those experiencing spelling-only retardation, and those without reading or spelling problems. A series of one-way ANOVAs tested for differences between groups. Subjects with reading-plus-spelling retardation had lower verbal IQs, but not lower Performance IQs, an absence of reliable motor deficits, significantly poorer speech articulation, and substantially lower educational achievement. The spelling-only retarded group showed no evidence of general motor deficits or neurological impairment. However, they exhibited reliable deficits on the WISC-R Arithmetic and Coding subtests and poor writing ability.

GJESSING, H.-J. "Function analysis" of reading and writing behavior: A methodological approach to improved research in reading disability. In Yngve Zotterman (Ed.) *Dyslexia: Neuronal, Cognitive & Linguistic Aspects*. New York: Pergamon Press, 1982, 125-131.

Refers to two Norwegian studies, one completed and one on-going, both dealing with retarded readers. The completed study, a retrospective study of 188 protocols, classified children into the following categories: 45% as auditory dyslexics, 20% as visual dyslexics, 9% as auditory-visual dyslexics, 10% as emotional dyslexics, 11% as pedagogic dyslexics, and 5% as other cases. Traits of each group are described. In the on-going study, some 6,000 children will be followed from grades 1 to 3 in order to view problems involved in reading.

KAMHI, ALAN G., & CATTS, HUGH W. Toward an understanding of developmental language and reading disorders. *Journal of Speech and Hearing Disorders*, November 1986, *51*, 337-347.

Compares 12 children with language impairment (LI), 12 children with reading impairment (RI), and 12 normal children on tasks assessing the ability to generate representations of phonological, lexical, and morphological information. Subjects were all between the ages of 6-2 and 9-2 years and were matched for mental age using the *Test of Nonverbal Intelligence*. All children were administered the *Woodcock Reading Mastery Tests* and the *Test of Language Development*-Primary along with experimental tasks assessing word and sentence repetition (speech production) and knowledge of phonological and language units (sentence division, bisyllabic and monosyllabic word division, elision, segmentation, and grammatical judgment). RI and LI children made significantly more word repetition errors than normal children. Only the word and sentence repetition tasks significantly differentiated between LI and RI children. LI children performed significantly poorer than RI children on three measures: (1) total number of phonological processes used in the word repetition task, (2) number of processes used in producing phonologically simple words, and (3) the number of word omissions on the sentence repetition task.

SHARE, DAVID L., & SILVA, PHIL A. Language deficits and specific reading retardation: Cause or effect? *British Journal of Disorders of Communication*, December 1987, *22*, 219-226.

Follows a group of children in New Zealand from the ages of 3 to 11 to investigate the relation between general language skills and reading disability. The 1,039 children assessed at age three were tested at two-year intervals with 925 assessed at age 11. Measures administered were the *Burt Word Reading Test* and WISC-R for reading and intelligence. A family adversity index was determined. Various language measures were obtained: at age 3, the *Reynell Development Language Scales* and the *Peabody Picture Vocabulary Test*; at age 11, the *Progressive Achievement Test* (PAT) Listening Comprehension Test. Reading disability was determined by expected reading score from WISC-R Performance IQ. A group of 39 boys designated as reading disabled and a group of 39 boys matched for language and vocabulary scores were identified. Also included in the analyses were 453 boys in the remaining sample. At age 3, reading disabled boys had significantly lower scores on the Reynell composite measures than did the others. By age 11, the reading disabled boys showed a relative decline in language scores, but no relative decline was noted in the control groups.

JENKINS, JOSEPH R.; HELIOTIS, JAMES D.; STEIN, MARCY L.; & HAYNES, MARIANA C. Improving reading comprehension by using paragraph restatements. *Exceptional Children*, September 1987, *54*, 54-59.

Asks whether restatement training would aid the reading comprehension of learning disabled (LD) children. Subjects were 32 LD pupils in grades 3 through 6. A three-phase instructional program was developed to help pupils state the most important idea for a paragraph. Phases lasted 3 to 5 days each, and the total program was completed in 10 to 15 days with lessons about 20 minutes long. In the first phase, modeling, practice, and corrective feedback were used to help pupils name the most important person and state the major event in each paragraph. The second phase involved brief restatements by pupils of each paragraph. A third phase consisted of restating regular narrative paragraphs. Control groups worked on regularly assigned seatwork activities. Comprehension was assessed on a set of short stories which were read, recalled, and on each of which 12 short-answer comprehension questions were asked. Additionally, for the test of training, pupils were asked to write a brief sentence summarizing each paragraph. A near transfer and remote transfer task were also administered. For the near transfer task, pupils read a story but were given no instructions to write restatements; remote transfer involved reading a story with no writing materials provided for restating and no directions given. Restatement training appeared to improve comprehension under all conditions.

HØIEN, T. The relationship between iconic persistence and reading disabilities. In Yngve Zotterman (Ed.) *Dyslexia: Neuronal, Cognitive & Linguistic Aspects*. New York: Pergamon Press, 1982, 93-107.

Studies the relation between iconic persistence length and reading difficulties. Iconic persistence, also termed iconic memory, describes the sensory after-effect manifested after short exposures to light. In Experiment 1, 58 dyslexic pupils and 54 normal readers were tested for iconic persistence with light signals. In Experiment 2 groups were tested for perception of individual letters during proactive and retroactive interference. Dyslexics had a significantly greater mean value on the iconic persistence test. Dyslexics were divided into three subgroups of short, moderate, and long iconic persistence. Children with long iconic persistence had greater difficulty in reading letters under both proactive and retroactive interference conditions than did dyslexics with moderate or short iconic persistence length.

RYNARD, DAVE, & BESNER, DEREK. Basic processes in reading: On the development of cross-case letter matching without reference to phonology. *Bulletin of the Psychonomic Society*, September 1987, *25*, 361-363.

Reports the case of a 16-year-old male with no evidence of neurological impairment who had acquired only minimal reading ability. The boy was administered a WISC-R at age 9 and obtained a full-scale IQ of 71 (Verbal = 64; Performance = 85). At age 16, he was retested and scored 73 full scale, 51 verbal, and 95 Performance IQ. *Wide Range Achieve-*

ment Test scores at age 16 were 1.7 in reading, 1.9 in spelling, and 3.0 in arithmetic. On the *Peabody Picture Vocabulary Test* his age score was 12.7 years. He was presented with the letters of the alphabet in both lower- and uppercase and name the letter and articulate its sound. A cross-case matching task was also given with 52 pairs of lower- and uppercase letters, half of two same-name letters in different cases and half with different letters in different cases. Testing was carried out on a microcomputer, and data on naming latency and errors were collected. Subject made no errors in the cross-case matching task but had only 69% correct on the naming task and 65% correct on the sounding task. The authors conclude that findings demonstrate that knowledge of letter names is not a necessary condition for the development of the ability to cross-case match.

LOVETT, MAUREEN W. Sentential structure and the perceptual spans of two samples of disabled readers. *Journal of Psycholinguistic Research*, March 1986, *15*, 153-175.

Compares two samples of disabled readers, selected for their impairment at different points on a continuum of reading development, and a sample of fluent normal readers on different dimensions of reading skill, sound-symbol processing, and oral language development. One sample of disabled readers exhibited problems in decoding accuracy, the other showed a deficit in reading rate. A child in the accuracy disabled group had to score at least 1.5 years below grade level expectations on at least four different measures of word recognition. A rate-disabled child had to score close to or above grade level on four or more word recognition measures and at least 1.5 years below grade level on four out of five measures of reading rate. A total of 34 children was identified in each group with efforts to match samples on CA, WISC Verbal and Performance IQ, and ratio of boys to girls. Stimuli were 72 sentences constructed to represent four conditions, varying according to the absence or presence of semantic and/or syntactic structure. Children read the sentences and the eye-voice span (EVS) was recorded both on tape and manually. The two disabled groups differed in the dimensions of their spans during reading, with rate-disabled readers exhibiting significantly longer EVSs. The two groups did not differ in the extent to which they availed themselves of contextual constraints to extend their spans in reading connected text. Both groups appeared able to use syntactic information as an independent source of sentential information in reading, even the sample whose disability was associated with oral syntax deficits. Both disabled reader groups appeared to be reading with perceptual spans of reduced dimensions when compared with normal readers.

SWANSON, H. LEE; KOZLESKI, ELIZABETH; & STEGINK, PHILLIP. Disabled readers' processing of prose: Do any processes change because of intervention? *Psychology in the Schools*, October 1987, *24*, 378-384.

Assesses qualitative and quantitative changes occurring in two disabled readers' cognitive processes during strategy training. The two 15-year-olds had average scores on the WISC-R but percentile scores of 5 and 9 on the reading section of the *Woodcock-Johnson Psycho-Educational Battery*. Subjects listened to short prose passages, each containing 16 idea units, and were encouraged to recall the exact wording. Subjects were queried as to how they had remembered each idea unit recalled. Protocols were analyzed and coded into seven categories. In the training period, students were provided a strategy training mapping organizer. Transfer of training was assessed in skill building materials. Analysis suggested that a qualitative shift in verbal strategy reports occurred. Prose recall improved, but concurrent effects on reading comprehension in the skill building materials were minimal.

SEIDENBERG, PEARL L., & BERNSTEIN, DEENA K. Metaphor comprehension and performance on metaphor-related language tasks: A comparison of good and poor readers. *Remedial and Special Education*, March-April 1988, 9(2), 39-45.

Seeks to determine if there are differences between good and poor readers at grades 3 and 5 relative to various aspects of comprehending and performing metaphoric language. At each grade level, 10 pupils were selected as either high or low reading ability based on Reading Comprehension scores on the *Stanford Reading Achievement Test*. Comprehension of literal and metaphoric language was examined by means of eight paragraph-length stories. For each story there were two sets of alternative completion sentences, a literal and a metaphor set. Children were asked to select the sentence that best completed the story for both sets. In addition, three subtests of the *Word Test* were administered: Synonyms, Multiple-Definitions, and Absurdities. The ability of children to name critical semantic attributes of the metaphorical vehicles in the metaphor task was also assessed. Analysis of variance techniques indicated no difference in performance between good and poor readers on literal comprehension, but significant differences on the metaphor comprehension and the metaphor-related language tasks with high reading ability groups performing better. For the metaphor, multiple-definitions, and attributes tasks, fifth graders did not significantly outperform third graders. The two reading groups also differed in the pattern of correlation coefficients among their metaphor scores and their scores on the language tasks. For good readers, performance on the absurdities was correlated with and a better predictor of metaphor comprehension; for poorer readers, performance on synonyms was a better predictor and was correlated with metaphor comprehension.

Smith, Suzanne T.; Mann, Virginia A.; & Shankweiler, Donald. Spoken sentence comprehension by good and poor readers: A study with the token test. *Cortex*, December 1986, *22*, 627-632.

Examines good and poor readers on a test of immediate memory for word strings and on the *Token Test*. Subjects were 35 grade three children, identified as good readers (n = 18) or poor readers (n =17), on the basis of teachers' evaluations and scores on the reading subtest of the *Iowa Test of Basic Skills*. All had IQs of 90 or above on the *Peabody Picture Vocabulary Test*. Assessment for word strings was done by having children listen to eight strings of six monosyllabic words and to repeat each in the order given. Poor readers made significantly more errors than did good readers in recall of word strings and on *Token Test* items which imposed the greatest burden on short term memory. It was concluded that results did not indicate a syntactic deficit on the part of poor readers. Rather, poor readers made less effective use of working memory in processing spoken sentences than did good readers.

Slaghuis, W.L., & Lovegrove, W.S. The effect of field size and luminance on spatial-frequency-dependent visible persistence and specific reading disability. *Bulletin of the Psychonomic Society*, January 1987, *25, 38-40*.

Studies the effect of field size and stimulus luminance on spatial-frequency-dependent visible persistence in normal and specific-reading disabled (SRD) boys. SRD children were defined as having at least normal scores on an intelligence test and making average progress in other school subjects, but with a reading delay of at least 2.5 years. Numbers of subjects were 12 boys each, SRD and normal achieving, approximately 12 years old. Boys received a series of photographic prints presented via tachistoscope with spatial frequency, duration, luminance, and field size varied. A five-way ANOVA revealed that visible persistence in SRDs is less sensitive to the effects of increasing field size.

Beale, Ivan L.; Matthew, Peter J.; Oliver, Simon; & Corballis, Michael C. Performance of disabled and normal readers on the Continuous Performance Test. *Journal of Abnormal Child Psychology*, June 1987, *15*, 229-238.

Compares the performance of disabled and normal readers on the *Continuous Performance Test* (CPT). A group of 11 twelve-year-old, reading-disabled children were matched with two control groups: one the same sex, age, and similar IQ but reading normally, and the other the same reading age. All pupils were administered a CPT, by way of a computer, in which a mixed sequence of letters was presented at a rapid rate, and they were required to identify a target letter or combination of letters. The stimuli were either of high target or low target probability. Two dependent variables were used: (1) a sensitivity index which reflected ability to discriminate the target from distracting stimuli, and (2) a criterion measure which reflected a willingness to identify the target. Significant differences among groups were found on the sensitivity measure. One type of false alarm showed the effect of chronological age; another type of false alarm showed the effect of reading age. Significant differences were also found on the criterion measure, suggesting that the disabled readers were more conservative in their willingness to identify the target letter sequence.

Lovegrove, William; Slaghuis, Walter; Bowling, Alison; Nelson, Peter; & Geeves, Estelle. Spatial frequency processing and the prediction of reading ability: A preliminary investigation. *Perception & Psychophysics*, December 1986, *40*, 440-444.

Reports data on the relation between contrast sensitivity for low-spatial frequency gratings in 201 Tasmanian children at age 6 and the reading ability of 123 of these original children at age 8. Stimuli were photographic prints of sine-wave grating with spatial frequencies of 2 and 4 cpd. Gratings were presented tachistoscopically. Each subject used his/her preferred eye. A polarizing filter was rotated to change stimuli from a clear blank field to a high-contrast grating. Test stimulus contrast was varied in steps between blocks of 12 trials (6 gratings and 6 blanks). Subjects were to say whether grating was present or absent. Subjects also took the vocabulary test of the *Tasmanian Early Assessment Programme*, where the child had to explain the meaning of each word administered, and the standard digit-span test from the same assessment instrument. Two years after the initial testing, subjects took the *Neale Analysis of Reading Ability* in an individual administration. Using a stepwise multiple regression procedure, entering contrast sensitivity only, contrast sensitivity was a significant predictor of reading ability. Adding vocabulary and digit span produced a multiple R significant at the .01 level. When contrast sensitivity was removed, there was a significant change, indicating a unique contribution to the regression equation. The researchers suggest that differences in low level processing are present before reading instruction begins, and may lead to disability.

Gentile, Lance M., & McMillan, Merna M. *Stress and Reading Difficulties*. Newark, DE: International Reading Association, 1987.

Includes a chapter reviewing the research relating stress, stressors, and stress reactions to emotional maladjustment in reading. It is concluded that research indicates a connection exists between stress and reading difficulties. Parents, teachers, and peers may overtly or covertly contribute toward making reading threatening or stressful. Reactions to stress and reading difficulties may be both physical and psychological. Manifestations of such behavior range from anger and aggression to avoidance and apprehension.

IV-15 Sociocultural factors and reading

Dreeben, Robert, & Gamoran, Adam. Race, instruction, and learning. *American Sociological Review*, October 1986, *51*, 660-669.

Studies school districts in the Chicago area and within these, 7 schools, 13 classes, 20 instructional groups, and 302 first graders. The districts were selected to reflect broad socioeconomic (SES) community differences. Classes were observed for 12 full days over the period of a school year, at three-week intervals. Close attention was paid to the basal materials used and to the activities entailed in reading instruction and their duration in whole class, instructional group, and individualized settings. Scores on the Barr-Kibby *Word-Learning Tasks* and the Reading subtest of the *Wide Range Achievement Test* were combined to provide a measure of aptitude or readiness. First-grade achievement was gauged by the *Interactive Reading Achievement System*. Tests of word learning, with the words sampled from the basals used in each class, were administered in December, March, and May. SES, age, sex, and race information were collected also. Race, aptitude, and SES together accounted for 66% of the variance in word learning. However, neither differences in individual background characteristics (aptitude and SES) nor variation in ability group assignment were sufficient to explain why nonblacks learned more than blacks. While the difficulty of the materials used contributed to learning words, it had little bearing on racial differences in word learning. It was concluded that learning was produced through a set of technological conditions, primarily time spent in instruction and the coverage of instructional materials. Racial differences in instruction and in learning did not occur within groups or within classes when aptitude and SES were controlled.

Mabey, Christine. Black pupils' achievement in inner London. *Educational Research*, November 1986, *28*, 163-173.

Analyzes the reading levels and the examination achievement of black Afro-Caribbean students and their white peers at 15, school leaving age in Britain, and when they actually left school or further education, to determine whether reading level is a good predictor of achievement and whether additional time in school affects examination scores. Data were part of a longitudinal study of 32,000 pupils initiated in 1967, when pupils were 8; subjects were tested again at ages 10, 13, and 15. Level of achievement of black Afro-Caribbean pupils was significantly lower than white peers at school leaving age, although the drop-out rate for white peers was nearly twice as high. At actual school leaving, however, the gap between black and white had narrowed, reflecting a 230% increase in the number of blacks who had passed five or more subtests. Reading scores accounted for nearly 50% of the variance in these examination scores. When examination scores were adjusted for reading, Afro-Caribbeans achieved more than would have been predicted, actually out-scoring their white peers. Additional years of school was associated with higher exam achievement, with optimum gains coming with two additional years for white British subjects and three years for black Afro-Caribbeans. While level of commitment was higher for the blacks, and many did score higher, several were still not passing the higher levels of the test.

Ortiz, Vilma. Reading activities and reading proficiency among Hispanic, black, and white students. *American Journal of Education*, November 1986, *95*, 58-76.

Reanalyzes the results of the 1984 National Assessment of Educational Progress to examine the relation between various socioeconomic and home factors and the reading achievement of minority children. When achievement results were separated by race/ethnicity, it was found that Hispanic and black students scored significantly lower. These differences in achievement were explained in part by the lower educational levels of Hispanic and black parents and by fewer home related reading activities. The influence of parent education increased with grade level, but the relation between parents' education and achievement was found to be different among racial/ethnic groups. For example, at the junior and senior high school level, the Hispanic/blacks and Hispanic/whites differences in achievement actually increased as parents' education increased. Home reading activities also affected achievement and the effect appeared similar for minority and nonminority children.

Subrahmanyam, S. Reading achievement of primary school children. *Indian Educational Review*, October 1986, *21*(4), 43-56.

Conducts a study investigating the relative influence of various variables on the reading achievement of primary school children in India. Three major categories of variables included were personal characteristics, school conditions, and home background. Using stratified random sampling procedures, 1,200 class V pupils were drawn from 60 primary schools and administered the *Sri Venkateswara Silent Reading Test* and Raven's *Progressive Matrices Test*; a series of questionnaires and interviews were also used in collecting data. Correlation coefficients with reading achievement were .86 with personal characteristics, .67 with school conditions, and .43 with home background. The multiple correlation coefficient between reading achievement and personal characteristics was .865; with school condition included, the multiple R was .903; with home background added, a multiple R of .923 was found. Sex differences in reading achievement were not significant.

Morrison, Delmont C., & Hinshaw, Stephen P. The relationship between neuropsychological/perceptual performance and socioeconomic status in children with learning disabilities. *Journal of Learning Disabilities*, February 1988, *21*, 124-128.

Studies the relationship between socioeconomic status (SES) and performance on a series of neuropsychological/perceptual tests in a group of reading disabled children. The final sample consisted of 41 boys and 16 girls, ranging in age from 71 to 133 months. WISC-R scores were at least 80 with a mean of 110.9; comprehension as determined by the *Gates-MacGinitie Reading Test* was at least .6 standard deviations below estimated IQ and .4 standard deviations below estimated IQ on one of the three subtests of the *Wide Range Achievement Test* (Reading, Arithmetic, Spelling). SES was determined by the *Hollingshead Two-Factor Index of Social Position*. Neuropsychological/perceptual measures administered included the *Developmental Test of Visual Motor Integration*, the *Underlining Test*, the *Target Test*, and the *Rapid Automatized Naming Test*. None of the neuropsychological measures was significantly correlated with SES. SES was significantly correlated with IQ (-.29). Coefficients between SES and achievement measures ranged from -.27 to -.37.

Leichter, Hope Jensen. Families as environments for literacy. In Hillel Goelman, Antoinette A. Oberg, & Frank Smith (Eds.) *Awakening to Literacy*. London: Heinemann Educational Books, 1984, 38-50.

Briefly reviews studies that have examined families as educators. Studies that have explored the ways in which family environments condition the child's experience with literacy were classified into three approaches: studies of the physical environment, studies of interpersonal interaction, and studies of emotional and motivational climates. Examples, methodological issues, and the complexities of each approach were discussed. Issues in the conduct of intensive studies of families were also identified and recommendations made. The author argued for the need of observational and ethnographic studies of families in their natural environment and for the importance of analyzing family education in *family* terms and not by comparison to models of education in schools.

Hannon, Peter. A study of the effects of parental involvement in the teaching of reading on children's reading test performance. *British Journal of Educational Psychology*, February 1987, *57*, 56-72.

Investigates the effects of parental involvement on working-class children's reading test performance. For a period of three years, three consecutive groups of five-year olds at one school in northern England began the project and were followed for three years. Children were encouraged to take home their reading books and parents were encouraged to hear them read. Reading cards were used to offer suggestions from the teachers and to verify parental involvement. Reading attainment was assessed each year with standardized reading tests. The performance of children in the study was compared to previous cohorts who had attended the same school before the experimental intervention program. No significant difference in test results was found between children in the project and pre-project cohorts. The failure to produce significant differences was influenced by a high degree of pre-project parent involvement and an unusually high attrition rate.

IV-16 Reading interests

Greenlaw, M. Jean. Reading interest research and children's choices. In Nancy Roser & Margaret Frith (Eds.) *Children's Choices: Teaching With Books Children Like*. Newark, DE: International Reading Association, 1983, 90-92.

Categorizes and ranks 700 titles selected by almost 10,000 children and included in the Children's Choices List. At the primary level books classified as *funny* were first choice. In second place were books designated *make-believe*, about *people*, and *animal stories*. For the 306 upper level books, the first levels of choice were *adventure*, *jokes/humor*, and *informational*.

Gjengset, Gunnar H. Children's reading habits – a preliminary project report. *Scandinavian Public Library Journal*, 1986, *19*(3), 100-103.

Interviews Norwegian Class 4 pupils (10-11 years old) and their parents to determine what and how much the children read, the role of the book in their leisure activities, and what or who influences their reading habits. The children from the six schools investigated read more books and watched less television than their parents. They read series books largely because they were recommended by classmates and they received them as gifts from adults. They do not find them more appealing but more available and cheaper than other books. For many, reading is a last choice of activities in which to participate. The children reported that neither their parents nor their teachers recommend books to them.

Carter, Mark A. How children choose books: Implications for helping develop readers. *Ohio Reading Teacher*, April 1988, *22*(3), 15-21.

Interviews 36 children in grades 1 through 4 relative to their strategies and reasons for selecting a book for free reading. Interviewees were selected because they had a book on their desk or were seen reading during sustained silent reading time. Responses for book selection fell into 11 categories with structural elements such as illustrations and length predominating. Selecting a book because of content was the second most frequently used category with familiarity and genre following as third and fourth in frequency.

Wilson, Patricia J., & Abrahamson, Richard F. What children's literature classics do children really enjoy? *The Reading Teacher*, January 1988, *41*, 406-411.

Asks what classics children like in a four month study. Four sets of 27 classics in paperback were sent to each of nine schools with a student population of 2,000 fifth and sixth graders. The study was introduced to the students by a videotape. The pupils indicated their level of enjoyment for each book read on a 5-point scale and told briefly why they liked or disliked it. Those who read three or more classics voted upon their favorite one. Among the 773 fifth- and sixth-grade children who read at least one classic, 374 read three or more. The favorite book among the latter group was *Charlotte's Web*.

Martinez, Miriam, & Teale, William H. Reading in a kindergarten classroom library. *The Reading Teacher*, February 1988, *41*, 568-572.

Questions what kindergarten children do with books in the classroom library and what factors influence children's uses of books. They were observed in their classroom library twice a week for eight weeks by three people. The five to seven children using the library at one time were told they could read books to themselves or to each other. For each child the observers recorded the title of each book selected, the ways in which the child used the book, and any social interaction around the book with other persons. Each book was described in three ways: familiarity (whether or not read by teacher), predictability (repetitive language, predictable plot line), size. Books were used in seven different ways, but three behaviors were most common. They spent more time browsing through unfamiliar books but showed more sophisticated behaviors with familiar books. Emergent reading was more common when children selected books with predictable structures.

Morrow, Lesley Mandel. Promoting innercity children's recreational reading. *The Reading Teacher*, December 1987, *41*, 266-274.

Shows how regularly scheduled activities with books in four summer recreational daycare centers and well designed library corners influence children's interest in reading. The purpose of the study was to affect the recreational reading behavior and attitudes of poor innercity children by a program that emphasized the enjoyment of literature. The project included 130 children, ages 6 to 10, all with lower socioeconomic backgrounds. The program included quiet book reading, a varied schedule of teacher-directed activities, free choice time, summary of the day. Teachers and children kept records of books read and checklists of activities done in free choice periods. Children read 300 books during the first four weeks and 521 in the second. Teachers' presentations were strong motivators for book selections. Enthusiasm for books increased during the project.

Hincks, Tony, & Balding, John W. On the relationship between television viewing time and book reading for pleasure: The self-reported behaviour of 11 to 16 year olds. *Reading*, April 1988, *22*, 40-50.

Collects and analyzes self-report data on the leisure time reading and television viewing of 13,395 British 11- to 16-year-olds. Subjects were asked to record the time spent reading a book for pleasure and the time spent viewing television on the weekday prior to filling in a questionnaire. Over 90% of both males and females spent some time viewing television. Girls spent less time watching than did boys, with the difference increasing somewhat by age 15 to 16. Almost 17% of boys and over 21% of girls reported watching television less than one hour, while 12.1% of boys and 8.3% of girls reported having spent five or more hours viewing television; two to three hours were reported by 18.4% of boys and 19.5% of girls. No time spent reading was reported by 62.6% of all boys and 52.7% of all girls, while 27% of boys and 32.7% of girls reported spending less than one hour reading a book. There was a steady decline in time spent reading from ages 11 to 16. There appeared to be no discernible association between the distribution of time spent viewing television and that spent reading books.

Fisher, James C. Older adult readers and nonreaders. *Educational Gerontology*, 1988, *14*(1), 57-67.

Describes the reading activities engaged in by older adults identified as high readers and low readers. Hour-long interviews were conducted with 69 subjects whose mean age was 78. In addition, a 27-item reading inventory was used in determining the frequency with which various reading activities were performed. In describing the amount of reading done, 39% said not very much or none, while 61% said very much or some. These two groups were then designated as low and high readers, respectively. On the inventory, the following items were checked as being read most frequently: calendar, newspaper, and street or traffic signs. Least frequently read items from the inventory were income-tax information, insurance policies, and stock or investment reports. High readers were more likely to report that their reading ability had improved and low readers that their reading ability had declined. High readers tended to have had more schooling, and were more likely to be younger and healthier.

Bank, Stanley. Assessing reading interests of adolescent students. *Educational Research Quarterly*, 1986, *10*(3), 8-13.

Surveys the reading interests of 844 students, grades 6 through 12, from 10 secondary schools in the New York metropolitan area through a teacher-administered questionnaire. Subjects indicated what topics they selected when reading on their own from a list of 58 topics. These responses were correlated with 10 kinds of information given by teachers about these students. Data were analyzed using cross tabulation. A table was prepared listing the topics in order of their popularity and the effects on reading interests of sex, grade level, ethnicity, native language, grade earned in English the previous year, and average grade earned the previous year for all subjects, as well as the effects on reading interest of the achievement ability level of English class, reading ability, social class, and cultural exposure. It was concluded that the table permits teachers to make more accurate determinations of reading interests than were previously possible.

Branvold, Dwight, & Von Harrison, Grant. The effects of computer-based personalized stories on readers' interest. *Contemporary Issues in Reading*, Spring 1988, *3*, 51-54.

Asks whether beginning readers prefer computer generated personalized stories over the same stories not personalized. Subjects were 25 grade 1 and 34 grade 2 pupils. The two teachers involved trained six upper grade pupils to operate a computer program and serve as tutors. Tutors worked with young children on a one-to-one basis and fed into the computer information from each pupil which personalized the stories. One personalized and one non-personalized story were then given to beginning readers, and they were asked which was preferred. Of the first graders, 15 preferred the personalized story, while 26 of the second graders stated that they preferred it over the nonpersonalized story.

Bleakley, Mary Ellen; Westerberg, Virginia; & Hopkins, Kenneth D. The effect of character sex on story interest and comprehension in children. *American Educational Research Journal*, Spring 1988, *25*, 145-155.

Examines the effects of sex of the main character in a story on the interest and comprehension of boys and girls. Three each of adventure, mystery, and humorous stories were selected from periodicals. Each story was then written with a male and with a female main character. The 540 fifth graders involved were stratified by sex and classified into three ability levels based on total reading scores on either the *Metropolitan Achievement Test* or the *Iowa Tests of Basic Skills*. Each child was randomly assigned one of the 18 stories with half receiving a story in which the main character was of the same sex. An 8-question interest measure, an 8-item multiple-choice comprehension test, and a cloze comprehension test were all administered following the reading of a story. ANOVA procedures were used in analyzing data. A strong interaction was found between sex of reader and sex of main character and was evident for all ability levels and for all genre. In particular, boys rated stories much less interesting when the protagonist was a female; girls found stories with male protagonists less interesting, although their preferences were not as pronounced. No comprehension differences were found.

Spangler, Katy. Reading choices of native children—an informal analysis. *Reading Horizons*, Spring 1988, *28*, 185-191.

Surveys the reading preferences of native and non-native Alaskan elementary school children. As part of a book promotion project, records were kept of the books read by children at one elementary school in Juneau. Of particular interest was whether native children preferred "children's Alaskana" (books specifically written about Alaskan culture) over more general children's literature. The survey found that the Alaskan books were not more attractive to the native children. The non-native children chose Alaskan books more often. Specific titles and the incidence with which they were read are provided.

Polak, Jeanne, & Krashen, Stephen. Do we need to teach spelling? The relationship between spelling and voluntary reading among community college ESL students. *TESOL Quarterly*, March 1988, *22*, 141-146.

Reports three studies that explore the relation between spelling competence and voluntary reading for community college ESL students. In all three studies, students were given a dictation task and asked to complete a questionnaire on their voluntary reading. The dictation task varied among the three studies from selected word lists to an intact passage. Total scores were based on the number of words misspelled. Although modest in size, significant negative correlations were found between voluntary reading and spelling errors in all three studies (range = -.344 to -.473). A multiple regression analysis found that reported voluntary reading had a larger effect on spelling than did first language.

WINKLE, ALICE W. Research on aliteracy: Why Johnny doesn't read. *Ohio Reading Teacher*, January 1988, *22*(2), 40-47.

Reviews limited studies on why children do not choose to read. The literature is reviewed under three possible causes for aliteracy: reading ability, reading instruction, and home environment.

IV-17 Attitudes and affect toward reading

MORROW, LESLEY MANDEL. Developing young voluntary readers: The home – the child – the school. *Reading Research and Instruction*, Fall 1985, *25*, 1-8.

Reviews empirical studies describing home and school characteristics that encourage the development of young voluntary readers. The importance of providing a rich reading environment in the classroom, especially a good classroom library corner, and strong literature activities to attract children to books are stressed.

KRASHEN, STEPHEN D. Encouraging free reading. In Malcolm P. Douglass (Ed.) *Claremont Reading Conference Fifty-First Yearbook*, 1987, 1-10.

Reviews selected research on free reading. The author argues for the importance of a personal reading program as part of the language arts curriculum.

SARACHO, OLIVIA N. Young children's attitudes toward reading. *Educational Research Quarterly*, 1984-1985, *9*(4), 19-27.

Examines the attitudes toward reading of 3-, 4-, and 5-year old children. The sample consisted of 744 children at each age level and included children from different ethnic backgrounds. The *Preschool Reading Attitudes Scale*, an instrument designed for the study, was used to assess attitudes towards four types of reading activities: (1) school reading activities, (2) nonschool reading activities, (3) library reading activities, and (4) general reading activities. Factor analysis resulted in four dimensions of reading attitudes: Reading Books in General, Reading Printed Material in School, Reading Books in the Library, and Reading Books in the Classroom.

ANDERSON, MARGARET A.; TOLLEFSON, NONA A.; & GILBERT, EDWYNA C. Giftedness and reading: A cross-sectional view of differences in reading attitudes and behaviors. *Gifted Child Quarterly*, Fall 1985, *29*, 186-189.

Investigates the self-reported attitudes toward reading and reading behaviors of 153 elementary, 68 junior high, and 55 senior high subjects, all identified as gifted. Subjects scored at least two standard deviations above the mean on an individually administered ability test (unnamed) and obtained composite reading scores in the top 5% of the national norm group on achievement tests (unnamed). An 11-item Likert-type attitudinal scale was administered. Data on number of books read and reasons for reading them were collected also. Primary age children reported reading over 19 books a month; by high school level, the average was 3.29 books per month. Older respondents reported less interest in reading than did younger children. Of the total group, 41% reported that reading was more enjoyable than watching television. Girls reported reading was a hobby significantly more often than did boys.

GRAY, MARY JANE. Reading: Why? *Reading Horizons*, Fall 1985, *26*, 33-38.

Asks third graders from a suburban area two questions: (1) Why should children learn to read?, and (2) Why do adults need to read? Responses to the first question were categorized as job related, utilitarian, pleasure, and knowledge. The greatest number, seven, fell under utilitarian purposes, with six responses in each of the pleasure and knowledge categories. For the second question, 14 responses were related to obtaining a job, and 5 to utilitarian purposes.

OKAMOTO, KEIROKU, & OHKURA, KYOSUKE. A study on appreciation attitude of children in reading and music. *Science of Reading*, December 1987, *31*, 132.

Cites results of two 25-item questionnaires administered to sixth- and ninth-graders in Japan. The instruments assessed appreciation of music and reading. Girls tended to report a higher level of reading appreciation than did boys. Little differences were found between grade levels or between rural and urban subjects in their levels of reading appreciation.

WADA, MASATO. A structural analysis of the reading behavior of high school students. *Science of Reading*, December 1987, *31*, 145.

Administers a reading behavior questionnaire to 152 11th-grade boys in Japan. Quantified was the amount of book reading reported for the previous day, the previous week, and the previous month. Students were subdivided into four groups based on physiological arousal (P) and facilitating conditions (F): High P-High F, High P-Low F, Low P-High F, Low P-Low F. Students in the High P-High F subgroup reported the highest amounts of reading. Other variables included in the analysis were: Intentions; Habits; and the Social, Affect, or Consequence value subsets of Reading Intentions. Reading behavior was generally more dependent upon reading habits than upon reading intentions.

HENDERSON, PHYLLIS A. Effects of planned parental involvement in affective education. *School Counselor*, September 1987, *35*, 22-27.

Includes planned parental involvement in an affective education program and notes the effect on children's self-esteem, alternative thinking, and reading comprehension. Ten intact classrooms (n = 231) of fifth- and sixth-grade pupils from two elementary schools were involved. Administered were the *Coopersmith Self-Esteem Inventory (SEI)* to assess gains in self-esteem, the *Alternative-Thinking Questionnaire* (ALT) to assess gains in alternative thinking, and the reading comprehension test of the *Iowa Test of Basic Skills* (ITBS). At each school, the five classes were randomly assigned to the following treatments: (1) one class at each school to the affective education (AE) group; (2) two classes at each school to the affective education with planned parent involvement (AEPI) group; and (3) two classes at each school to the control group. AE and AEPI groups participated in 23 weekly half-hour sessions in affective education. In the AEPI group, 10 newsletters were sent to parents. Included in the newsletter was a column written by teachers and focusing on aspects of affective education. AEPI parents were invited to attend a seminar on helping children with reading. An evaluation questionnaire was sent home in the last newsletter. Analysis of covariance was used to analyze the data. The AEPI group showed significantly higher SEI posttest scores than did controls. No significant differences were found between AE and controls or between AE and AEPI on SEI scores. Results for the Iowa were similar with the AEPI on SEI scores. Results for the Iowa were similar with the AEPI group scoring significantly higher than controls; no other differences were found for reading.

DALY, JOHN A.; BELL, ROBERT A.; & KORINEK, JOHN. Interrelationships among attitudes toward academic subjects. *Contemporary Educational Psychology*, April 1987, *12*, 147-155.

Studies interrelationships in attitudes toward five major academic interests for college students. The 116 undergraduates completed three measures of math attitudes, three measures of oral communication attitudes, three measures of writing attitudes, two measures of reading attitudes, and three measures of science attitudes. Measures were completed in random order in a single sitting. A series of one way analyses of variance was utilized to assess sex differences. On the three math measures and on two of the science measures, females reported more negative attitudes and greater anxiety than did males. No other sex differences were found. A matrix of the correlation coefficients among measures was computed. Coefficients among measures for each construct tended to be relatively high, ranging from means of .71 for the oral communication measures to .86 for math anxiety measures. Coefficients among the constructs tended to be quite low. When the 14 scales were subjected to a principle components factor analysis with varimax rotation, five factors were extracted. Five factors were also obtained using an oblique rotation. Correlation coefficients among the five factors ranged from .00 between math anxiety and reading attitudes to .51 between the oral communication anxiety factor and the writing apprehension factor. Analyzing the five factors from the oblique analysis via another factor analysis resulted in two uncorrelated factors. The first was composed of oral communication, reading, and writing; the second, of science attitudes and math anxiety.

STEVENSON, HAROLD W., & NEWMAN, RICHARD S. Long-term prediction of achievement and attitudes in mathematics and reading. *Child Development*, June 1986, *57*, 646-657.

Reports data from a longitudinal study of children who were tested before kindergarten and then followed through subsequent years, with testing at grades 1, 2, 3, 5, and 10. Of the 255 initially tested, between 105 and 154 were tested at each collection point during the following years. The purpose was to investigate the long-term prediction of 25 measures of pre-reading, pre-arithmetic, perceptual-motor, learning, and memory tasks given prior to kindergarten, and to compare teachers' and mothers' ratings of children's general cognitive abilities at kindergarten (teachers) and grades 2, 3, and 5 (both), with the children's actual achievement, and with attitudes at the 10th grade. Children also rated themselves at grades 2, 3, and 5, comparing themselves to their classmates on five characteristics. At 10th grade, students completed a rating scale on their attitudes and beliefs about academic achievement in reading and mathematics. A subset of cognitive tasks maintained a high relation to math and reading achievement scores in high school. Self-concept at 10th grade showed effects of sex and content area; boys favored math, while girls favored reading. Attitudes, particularly for girls, were related to mothers' early rating of children's abilities and children's actual achievement scores. Sex differences on all measures favored girls.

SEARLS, EVELYN F. The ability of parents of disabled readers to predict their children's attitudes toward reading. *Journal of Reading Education*, Spring 1988, *13*(3), 27-37.

Assesses parents' ability to predict their children's reading attitude. A sample of 30 children attending a university-based reading center was administered the *Heathington Intermediate Attitude Scale* at the first tutoring session. Parents were also asked to independently complete the same scale as they thought their children would respond. Child and parent responses were compared to detect the degree of agreement. Items on the scale were classified into three categories: school behavior items, outside of school behavior items, and thoughts/feelings items. Agreement was significantly high on seven items, five of which pertained to children's behavior outside of school, one to in-school behavior, and one to thoughts/feelings. Parents of older children and males were more successful in predicting the attitudes of their children.

Johnstone, Judy Ramoy. A comparison of poor readers' preferences of post-reading motivational activities and teacher practices. In Joan Develin Coley (Ed.) *Reading: Issues and Practices*. 1987 Yearbook of The State of Maryland International Reading Association Council, Vol 4, 11-14.

Obtains information on the activities selected by poor readers following the reading of a book. Subjects were 131 children from 7 rural elementary schools, all of whom scored in or below the third stanine on the reading comprehension subtest of a standardized reading test. Pupils were asked to rate their feelings about 15 different post-reading activities on a five-point scale. The 36 teachers involved were also asked to rate the same 15 activities on a five-point scale in terms of how often they provided each activity. The three top activities preferred by children were art oriented but were seldom indicated as offered by teachers. The least liked activity by children was writing a book report; however, it was ranked fourth by teachers in terms of frequency of being offered.

Fagan, William. Are you that teacher? *Reading*, July 1987, *21*, 135-139.

Presents findings based on open-ended interviews with 26 prisoners in a medium security correctional institution. The average reading grade as determined by either the *Gates-MacGinitie Reading Test* or the *Schonell Graded Word Reading Test* was 5.7 with a range of 1.5 to 8.4. Subjects ranged in age from 18 to 34. The interview questions required retrospection about various school and reading related situations. Nineteen subjects recalled at least one teacher who liked them, while 21 indicated there was a teacher who didn't like them. Of the total group, 22 said that there were times when they couldn't finish their work, and 18 stated this resulted in a detention. Most disliked subjects such as reading and math and felt that school was a place for punishment.

IV-18 Personality, self-concept and reading

Halpin, Glennelle, & Peterson, Helen. Accommodating instruction to learners' field independence/dependence: A study of effects on achievement and attitudes. *Perceptual and Motor Skills*, June 1986, *62*, 967-974.

Attempts to determine the effect upon learning and attitudes of graduate and undergraduate educational psychology students taught using printed study materials designed to match cognitive styles. Students were considered to be field dependent or field independent based on scores on the *Group Embedded Figures Test*. Two sets of materials retaining the same organizational pattern and content were developed: (1) Form A materials for field-dependent persons contained visual cues, much structure, opportunities for review and feedback, and examples using socially oriented content to clarify concepts; and (2) Form B materials with concepts presented briefly and concisely, no visual cues, and with review activities requiring the use of problem-solving skills and analytic abilities. Subjects were randomly assigned to either Form A or B materials. Following completion of the materials out-of-class, students took a 75-item multiple-choice test and completed a semantic-differential measure of attitudes toward themselves as learners, individualized teaching, and accommodating individual learning styles. Multivariate and univariate analyses were used to treat the data. Significant differences were found in achievement and attitudes as a function of cognitive style but not of matching/mismatching instruction to cognitive style.

Phillips, C.J.; Stott, D.H.; & Birrell, Heather V. The effects of learning style on progress towards literacy and numeracy. *Educational Review*, February 1987, *39*, 31-40.

Examines the relation between learning styles and the early acquisition of basic educational skills (reading, spelling, and mathematics). The learning styles of a sample of British five-year olds were rated by their classroom teachers using the *Guide to the Child's Learning Skills*, a behavioral rating scale. Approximately one year later, educational achievement in reading, spelling, and mathematics was assessed using standardized tests. A significant relation was found between learning style and achievement. Lack of progress in basic skills was associated with faulty learning styles characterized by impulsivity, inattention, lack of motivation, and helplessness. Of the three dependent measures, spelling and mathematics were more highly related to learning style than was reading achievement.

ENOCHS, J.R.; HANDLEY, H.M.; & WOLLENBERG, J.P. Relating learning style, reading vocabulary, reading comprehension, and aptitude for learning to achievement in the self-paced and computer-assisted instructional modes. *Journal of Experimental Education*, Spring 1986, *54*, 135-139.

Assesses the effect of computer-assisted instruction (CAI) in teaching clerical skills. A sample of 100 U.S. Navy Yeoman were assigned to one of two instructional conditions: a traditional self-paced series of lessons or a computer-assisted program. The Yeoman "A" School Achievement Test served as pre- and posttest. Students receiving CAI scored significantly higher after training. A secondary analysis using scores from the *Learning Styles Inventory*, the *Armed Services Vocational Aptitude Battery*, and the *Nelson-Denny Reading Test* revealed significant relationships between aptitude measures and treatments. Arithmetic reasoning was related to achievement more for those receiving CAI but the general science measure was related more to achievement for the traditional method. High achievers in the traditional group preferred working with people, learning with teachers' assistance, using reading learning styles, and less organizing of course work. However, reading comprehension and goal setting were related more to achievement in the CAI group.

GARNER, C. WILLIAM, & COLE, ERNEST G. The achievement of students in low-SES settings: An investigation of the relationship between locus of control and field dependence. *Urban Education*, July 1986, *21*, 189-206.

Determines whether differences in locus of control and field dependence existed between 29 seventh-grade achievers and 26 seventh-grade non-achievers from low-SES settings, and whether such subsequently identified differences related to achievement in reading and/or mathematics. Subjects took the *School Attitude Measure* to determine locus of control and the *Group Embedded Figures Test* to determine field dependence. Mean scores suggested that achievers and nonachievers differed. Achievers were more internal than nonachievers, and they also differed significantly on field dependence. Point biserial correlation coefficients between achievement dichotomy and locus of control were not significant, but coefficients between achievement and field dependence were. Scores from the four groups formed on the basis of control and dependence scores were analyzed to explore differences in reading and math scores. Significant differences were found for both math and reading. Chi square analysis suggested that more nonachievers were external and field dependent and more achievers were internal and field independent. subjects with internal locus of control and either field independence or dependence scored higher than those with external locus of control.

RIDING, R.J., & COWLEY, J. Extraversion and sex differences in reading performance in eight-year-old children. *British Journal of Educational Psychology*, February 1986, *56*, 88-94.

Explores the interaction between personality (extraversion and intraversion), and sex (male and female), and their effect on the reading of 48 seven- and eight-year-old English children administered the *Junior Eysenck Personality Inventory* (JEPI) and three reading tests which differed in the task required (oral or silent reading) and the degree of context used: the *Burt Graded Reading Test*, the *NFER Primary Reading Test 2*, and the passage completion section of the *Neale Analysis of Reading Ability* at two levels of difficulty. Children were grouped into introverts, ambiverts, and extroverts on their JEPI scores. A three-way analysis of variance with repeated measures indicated a significant main effect for reading test type. There was significant interaction between extraversion and sex on the Burt and NFER tests. An ANOVA with repeated measures on the mean scores from the Neale Analysis found a main effect for text difficulty. There were three significant interactions: extraversion and sex, difficulty and mode, and difficulty and extraversion. Boy extroverts scored higher on reading comprehension than did boy introverts; girl introverts scored higher than girl extroverts. On difficult passages, ambiverts scored lower than either extroverts or introverts. Reading aloud scores were superior for reading passages of high difficulty and reading silently scores for passages of low difficulty.

RINEHART, STEVEN D. Conceptual tempo, studying, and reading. *Journal of Educational Research*, January-February 1988, *81*, 138-142.

Examines the effects of conceptual tempo on several reading and studying tasks. Subjects were 38 sixth graders in two West Virginia schools. Conceptual Tempo was determined by the *Matching Familiar Figures Test* (MFFT), and the comprehension subtest of the *Gates-MacGinitie Reading Tests*, Level D, was administered. Additionally, pupils took the outlining subtest of the *Wisconsin Tests of Reading Skills Development*, Level F, and were asked to read, take notes on, and recall an 800-word social studies passage. Recall was assessed by 14 short-answer questions. Length and quality of notes were determined. Children also summarized four short paragraphs, two with explicit and two with implicit main ideas. Pupils identified as reflective by MFFT scores tended to score higher than impulsives on the social studies test, took higher quality notes without spending more time on task or writing down more information, and wrote better summaries for paragraphs with implicit main ideas but not for paragraphs with explicit main ideas.

GRAY, MARY JANE, & HENNEBERRY, MARION. Good readers and their reading strategies. *Reading Horizons, Fall 1986, 27*, 38-44.

Queries 24 third graders in a suburban parochial school as to whether they think they are a good reader, why, and what they do when they do not know a word. Eighteen considered themselves good readers. Their reasons for doing so fell into three areas: (1) enjoyment and/or understanding of what they read, (2) accuracy in reading performance, and (3) opinion of adults. Four word attack strategies were named: context, phonics, asking an adult, or dictionary.

VINCENZI, HARRY. Depression and reading ability in sixth-grade children. *Journal of School Psychology*, Summer 1987, *25*, 155-160.

Seeks to determine if a relation exists between depression and reading achievement with two diverse groups of sixth graders. Subjects were 73 black pupils from a low middle-class neighborhood and 66 black pupils from a low-income neighborhood. The *Child Depression Inventory* (CDI), a 27-item forced-choice instrument, was used in assessing depression. Reading achievement was determined by fifth-grade scores on the reading battery of the *California Achievement Test* (CAT), pupils' current reading levels, and grade point averages for the first reporting period in sixth grade. Pupils in the lower socioeconomic school had a higher mean CDI score and a lower mean CAT score than did the other group. A significant negative correlation coefficient was found between CDI scores and CAT scores (r = -.40), between CDI and reading level (r = -.31), and between CDI and grade point average (r = -.24).

LAVOIE, JOSEPH C., & HODAPP, ALBERT F. Children's subjective ratings of their performance on a standardized achievement test. *Journal of School Psychology*, Spring 1987, *25*, 73-80.

Checks children's perceptions of their performance on a standardized achievement test and notes the relation to actual test performance. The 311 fourth-, fifth-, and sixth-grade pupils in the study were administered the complete battery of the *Iowa Tests of Basic Skills* including vocabulary, reading, mathematics, study methods, and mechanics of writing. On the last day of the four-day testing period, children were given a questionnaire asking them to rate on a five-point scale the difficulty of the test, the effort they expended in taking the test, the extent to which luck and ability influenced their overall score, how nervous they were in taking the test, and the importance of the test to them and to their parents. Separate Sex x Grade ANOVAs were carried out on the pupil ratings of performance on each of the subtests for each of the pupil subjective ratings. In general, there were no sex or grade effects. Additional analyses indicated that pupil ratings of performance were significantly related to actual performance on vocabulary, reading, language, work study skills, mathematics, and overall composite scores on the Iowa. Pupils who attributed their scores to ability outperformed those who attributed their scores to luck.

IV-19 Readability and legibility

ZAKALUK, BEVERLY L., & SAMUELS, S. JAY (EDS.) *Readability: Its Past, Present, and Future*. Newark, DE: International Reading Association, 1988.

Presents research reviews of older studies and summaries of on-going studies on readability, including papers presented as part of a symposium on readability at the Annual Convention of the International Reading Association. Two papers review the research on readability formulas and past attempts to investigate the readability of text; three papers look at present explorations of readability, including the use of readability formulas to measure text difficulty in non-English texts, techniques for determining readability without using readability formulas, and readability inspired writing criteria to make texts more comprehensible. Two papers suggest the future of readability research. One focuses on studies of text factors such as cohesive ties which influence readers' learning and memory of text. The other presents readability as a function of the interaction between text characteristics and reader resources, and presents a nomograph to use in determining the readability of text for individual readers. Papers suggest a switch from concern about text only to a concern of how text characteristics and reader resources interact in making text readable or less readable.

BURRILL, LOIS E. How well *should* a high school graduate read? *NASSP Bulletin*, March 1987, *71*(497), 61-72.

Describes a scale of text difficulty used in the Degrees of Reading Power (DRP) based upon a formula developed by Bormuth in 1969. DRP units form an equal interval scale ranging (in theory) from 1 to 100. The scale has a practical range of 50 DRP units from the easiest text that can be written (30-35 DRP units) to the most difficult found in English (80-85 DRP units). The writer maintains that the scale can explain all kinds of reading demands. This scale has been applied to newspapers, general interest magazines, professional journals, and various documents. The author reviews studies of DRP levels of newspapers. The average difficulty of front page articles was between 67 and 71 DRP units. Only about 40% of high school seniors can read 67 DRP units independently (with 90% probability of comprehension). A study of adult general interest magazines indicated the international news articles were 71 DRP units in difficulty, fiction articles were written at 56 DRP units level of difficulty, and the overall average difficulty for magazines was 65 DRP units. Materials used in a number of entry level categories in an insurance company showed a range from 64 to 72 DRP values.

HOUSTON, SAMUEL R.; AL-HEETI, KHALAF N.; & AL-HARBY, ABDULLAH H. Judgment analysis vs. paired comparison as a statistical procedure for capturing policy models in readability prediction. *Journal of Experimental Education*, Fall 1987, *56*, 24-27.

Compares the merits of two procedures for determining the readability of selected passages. Under the Judgment Analysis (JAN) procedures, five Arabic teachers of reading were asked to rank order 15 passages selected from elementary level reading textbooks according to their difficulty, based on five linguistic variable scores. In addition, the five judges used the JAN-PC (paired comparison) in which all possible pairs of the 15 passages were compared. More consistent results were obtained with the JAN-PC procedure compared with the JAN procedures.

KRULES, GILBERT K., & NOVY, FORREST. Word processing and effects of variability in type fonts. *Perceptual and Motor Skills*, June 1986, *62*, 999-1010.

Seeks to verify predictions derived from a multilevel-processing model of word reading. Two groups of 12 university students each were presented 24 eight letter words containing 2, 3, or 4 syllables printed in lower case using four different font types. One group of subjects saw words in a blocked condition such that there was initial uncertainty prior to each exposure about which word was to be exposed but not about the font. The second group saw words scrambled with respect to type font such that there was uncertainty before exposure about both word and font. Words were tachistoscopically presented for 150 msec. Fewer errors occurred in the blocked vs. the random condition. The average number of errors was smallest for two-syllable words compared with three- and four-syllable words. Errors were lowest with Bold font, highest with Gothic font.

GOULD, JOHN D., & GRISCHKOWSKY, NANCY. Does visual angle of a line of characters affect reading speed? *Human Factors*, April 1986, *28*, 165-173.

Wonders if the visual angle subtended at the eye by a line of printed characters affects a person's reading rate. Eighteen adult volunteers proofread 12 three-page articles. Each of these was printed in six sizes (or scales) in two different character sets. Reading distance was held constant (52 cm). Lines of characters on the pages subtended horizontal visual angles at a participant's eye of either 6.7, 10.6, 16.0, 24.3, 36.4, or 53.4 deg. Each subject read a different article at each of the 12 combinations of visual angle and character set. Proofreading Letter Gothic characters was faster than proofreading 3277 CRT characters. Proofreading speed and accuracy were affected by visual angle. Within a range of at least 16 to 36 deg., proofreading speed and accuracy were unaffected, supporting a belief that reading efficiency is invariant over a large range of normal viewing. Most printed text and text shown on computer terminal screens form visual angles within this range. The authors felt that differences in visual angle probably do not account for the slower reading speed found when people read from CRT displays than from paper print.

MUNCER, S.J.; GORMAN, B.S.; GORMAN, S.; & BIBEL, D. Right is wrong: An examination of the effect of right justification on reading. *British Journal of Educational Technology*, January 1986, *17*, 5-10.

Examines the effect on reading rate of presenting subjects with text in justified and unjustified format. The 56 subjects from a two-year college were assigned randomly to the two conditions. They were asked to read to find a semantically odd word in a series of "short" stories. A pretest given on similar material was used to classify students as good or poor readers. Two different versions of each of 12 stories were prepared, one right justified and the other unjustified. Each subject received two selections to read, one in each format. A correlation coefficient of .32 was found between reading ability and the degree of detriment caused by justification. Subjects performed significantly worse on right justified text. Good readers were more affected than poor readers.

MORIARTY, SANDRA E. Line length and Starch scores. *Visible Language*, Autumn 1986, *20*, 448-455.

Investigates the lengths of lines used in six years of advertising body copy (153 advertisements), comparing length in terms of average character counts and pica widths on the basis of adjusted "read most" scores provided by the Starch Readership Service, in order to determine if there is an optimum line length and a minimum and maximum range. Starch scores were adjusted to compensate for the interest of the 15 primary product categories usually appearing in the Starched magazines, decreasing scores in high-interest categories, and increasing scores in low-interest categories. The researcher hypothesized a normal curve for Starch scores, with longer and shorter lines having lower Starch scores. Data generally exhibited the hypothesized pattern. Shorter lines had lower average Starch scores, and scores increased as the number of characters in the line increased. Starch scores also fell as character count increased beyond the middle of the distribution. Two optimum line lengths seemed to be determined by the data: (1) 49 to 55 characters, 13 to 14 picas; and (2) 65 to 73 characters, and 18 to 22 picas. These lengths correspond to the two column and three column formats usually used in an 8 1/2 x 11 page size.

LUNN, ROBERT, & BANKS, WILLIAM P. Visual fatigue and spatial frequency adaptation to video displays of text. *Human Factors*, August 1986, *28*, 457-464.

Measures the effects of video display terminal (VDT) viewing of single-spaced text on contrast sensitivity to sine-wave gratings reflecting a wide range of spatial frequencies. Seven subjects, all with 20/20 correctable vision, read aloud a series of single-spaced short stories on the VDT. Baseline measures of contrast threshold were taken prior to the reading task, and then subjects were tested for contrast threshold at the same eight spatial frequencies (2, 3, 5, 7, 9, 11, 13, and 15 cycles/deg) tested in the baseline condition. It was found that single-spaced text on a VDT can significantly decrease contrast sensitivity in the range of spatial frequencies known to provide the principal stimulus for the reflexive accommodative response. It was concluded that single-spaced text, when viewed under controlled laboratory conditions, does induce spatial frequency adaptation at its fundamental component. Qualitative reports from subjects also indicated that they had been adapted by the display of single-spaced text.

BAILEY, IAN L.; BOYD, LAWRENCE H.; BOYD, WESLEY L.; & CLARK, MARLEEN. Readability of computer display print enlarged for low vision. *American Journal of Optometry & Physiological Optics*, September 1987, *64*, 678-685.

Compares the readability of pixel-magnified letters to their smooth counterparts on a micro-computer screen. Letters were presented on the screen in two variations of 24 point letter size: a twofold enlargement of the standard 12 point Times Roman font (grainy) and specially smoothed letters in 24 point Times Roman print (smooth). Thirty subjects participated, 15 low vision and 15 normal vision adults. Subjects were asked to count the occurrences of test letters in 32 separate displays, with each display containing 68 letters. Half of the display consisted of grainy letters, half of smooth letters. Two viewing distances, far and close, were tested. Recorded were subjects' scanning speed and an error score. For both groups, smooth letters allowed faster performance for the close distance only. Smoothing the letters aided accuracy at far distance, while at close distance smoothing improved accuracy for the low vision group only.

TROLLIP, STANLEY R., & SALES, GREGORY. Readability of computer-generated fill-justified text. *Human Factors*, April 1986, *28*, 159-163.

Describes two studies investigating the effects of fill-justification and left justification of computer text on rate and comprehension. Fill justification positions computer text so that right and left margins are even, creating a smooth rectangular text by varying spaces between words and letters in the text line. Left justification results in a ragged right margin, as line length varies with different word length. Experiment 1 compared reading speed and comprehension when 46 students enrolled in introductory computer classes read a passage from a magazine and then answered 15 recall fill-in-the-blank factual questions. Subjects timed themselves as they read but not as they answered questions, and text lookbacks were not allowed. One group read fill-justified text, the other left-justified. Experiment 2 was similar but questions were multiple-choice and tested recognition rather than recall. Subjects were 87 undergraduate students enrolled in rhetoric classes. Results suggested that reported times for reading fill-justified text were significantly longer than for reading left-justified text. No significant differences were found in comprehension in either experiment.

ISAACS, G. Text screen design for computer-assisted learning. *British Journal of Educational Technology*, January 1987, *18*, 41-51.

Reviews the literature on screen designs and the design of instructional text used in computer-assisted learning. First, local layout issues were discussed. These included type style, lower-case versus upper-case text, character attributes, line length, text justification, and line breaks. Second, broader issues involving the structure and function of screen displays were examined. Presented were the advantages and disadvantages of three methods of implementing functional areas: split-screen operation, ad hoc areas in specified locations, and pop-up windows.

GOULD, JOHN D.; ALFARO, LIZETTE; FINN, RICH; HAUPT, BRIAN; & MINUTO, ANGELA. Reading from CRT displays can be fast as reading from paper. *Human Factors*, October 1987, *29*, 497-517.

Describes six experiments comparing reading from paper and from cathode ray tube (CRT) displays when the display looked similar to paper. CRT displays had the same font, polarity (dark characters on a light background), size, color, and layout as that on paper. In all six experiments, the task was proofreading for misspellings in articles of about 1,000 words. In each article, there appeared six to nine misspellings. Four types of misspellings were present: letter omissions, letter substitutions, letter transpositions, and letter additions. In all experiments, subjects were adult volunteers working in a research laboratory. Numbers ranged from 12 to 18 in the six experiments. Reading speeds on CRT displays equalling those on paper occurred when CRT displays (1) contained character fonts resembling those on paper, (2) had a polarity of dark characters on a light background, (3) were anti-aliased (i.e., contain grey level), and (4) were shown on displays with relatively high resolution.

NORDQVIST, TOMMY; OHLSSON, KJELL; NILSSON, LARS-GORAN. Fatigue and reading of text on videotex. *Human Factors*, June 1986, *28*, 353-363.

Reports 3 experiments in which the effects of fatigue are studied during the reading of print text or the reading of videotex (interactive or two-way television). Subjects, university undergraduates, 24 in each experiment, read for approximately two hours time. In Experiment 1, there were six trials, each of 15 minutes of text, followed by five minutes of testing. Subjects scanned for a given target letter, responded to an auditory-motor reaction time task, and recalled as much information as possible from the material read. Experiment 2 added a proofreading task to the tasks of Experiment 1, and rated the fatigue level at the end of the experiment. Experiment 3 increased difficulty, with subjects simultaneously searching for target letters. Using subjects' self ratings, no obvious effects of fatigue were found across experiments, even as task difficulty increased. When inferring from performance measures, it appeared that slower reaction times might indicate more fatigue in the videotex group than in the print group.

PICKWELL, L.D.; YEKTA, A.A.; & JENKINS, T.C.A. Effect of reading in low illumination on fixation disparity. *American Journal of Optometry & Physiological Optics*, July 1987, *64*, 513-518.

Investigates the effect on fixation disparity and visual discomfort of requiring individuals to read under conditions of inadequate illumination for one-half hour. Fifty patients attending the School of Optometry, University of Mashhad, in Iran, served as subjects. They ranged in age from 12 to 49 years. All had normal binocular vision and good visual acuity in each age. Amount of fixation disparity was measured at 10 minute intervals during periods of increasingly lower levels of illumination. Fixation disparity increased under inadequate illumination and was accompanied by visual discomfort.

CARRELL, PATRICIA L. Readability in ESL. *Reading in a Foreign Language*, Autumn 1987, *4*(1), 21-40.

Presents a literature review critical of the use of existing readability formulas for determining the difficulty of nonEnglish texts. The reviewer raises criticisms of readability formulas in general before focusing on the extension of readability formulas to languages other than English. Among the problems reviewed are the misuses of writing to formula or simplifying to formula in an attempt to make text easier to read. The reviewer demonstrates that current formulas ignore the reader and reader variables such as background knowledge, and ignore the interactive nature of the reading process. Growing out of the research review, the reviewer gives 8 recommendations to follow when selecting reading materials to match ESL readers' abilities.

IV-20 Literacy acquisition

TEALE, WILLIAM H. Emergent literacy: Reading and writing development in early childhood. In John E. Readence & R. Scott Baldwin (Eds.) *Research in Literacy: Merging Perspectives. Thirty-sixth Yearbook of The National Reading Conference, 1987, 45-74.*

Reviews research in emergent literacy. Topics included are: The functions and uses of reading and writing, Early reader studies, Environmental print studies, Acquisition of reading and writing concepts, Storybook reading in early childhood, and Classroom applications of emergent literacy research. The author concludes with seven main issues and unresolved questions about emergent literacy.

STANOVICH, KEITH E. Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly*, Fall 1986, *21*, 360-406.

Synthesizes research on individual differences in literacy acquisition and presents a framework for conceptualizing what is known about the effects of reading on cognitive development and on reading relationships. Posits that much is known from empirical evidence, but that problems in interpretation have developed because of failure to study the simultaneous or successive operations of many different information-processing operations. The reviewer states the need to determine which relationships are causal; which are developmentally limited; which are the result of other variables that enter into relationships through reciprocal causation, the idea that causal connections are bidirectional; and which are consequences of the individual's reading level and past reading history, an organism-environment correlation. Hypotheses are advanced for incorporating reciprocal relationships and feedback effects within a model of developmental changes in the cognitive processes related to reading. Matthew effects, the idea that early achievement with advantageous educational experiences facilitates the acquisition and use of new educational experiences, are suggested as possible explanations of achievement or nonachievement. Reciprocal causation and Matthew effects are used to clarify some of the issues in reading disabilities, especially the assumption of specificity of deficit.

Paris, Scott G., & Wixson, Karen K. The development of literacy: Access, acquisition, and instruction. In David Bloome (Ed.), *Literacy and Schooling*. Norwood, NJ: Ablex Publishing Corporation, 1987, 35-54.

Reviews approximately 15 years of research studies on reading, literacy, and schooling to reconcile the diverse findings from ethnographic and cognitive developmental research. Discusses the sociocultural influences of access to literacy opportunities and the contexts of literacy development, as well as the knowledge, skills, and motivation that children have as they learn to read and write. Instructional methods that promote literacy and implications for further research are included.

Cronin, Mary C., & McGovern, Elizabeth. Growth of the awareness of print and its functions in inner-city three-to-six year olds. *Irish Papers Presented at Fourth European Reading Congress and Tenth Annual Conference of the Reading Association of Ireland, 1985, 13-22.*

Studies the early literacy awareness of 13 children, ranging in age from 3.6 years to 6.6 years. Eight were studied for a two-year period, two left after the first year of the study, and 3 were added for the second year. Children were from the inner city of Dublin, Ireland, and from homes and neighborhoods where they had little exposure to print. All attended a neighborhood preschool. Children were asked to perform the following tasks: distinguishing the reading process; knowledge of environmental print; knowledge of the functions of books and other printed matter; and the function of print. Children's performance fell into three categories: those who had some knowledge of words and some control over predicting and monitoring; those who had an awareness of graphics but didn't have developed strategies; and those who had little control and could only identify print in specific non-print contexts. The findings suggest three variables explain the range of reading performance: amount of school attendance, previous experiences with print, and the nature of mother-child interactions or mediations with print.

Bussis, Anne M.; Chittenden, Edward A.; Amarel, Marianne; & Klausner, Edith. *Inquiry into Meaning: An Investigation of Learning to Read*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc., 1985.

Presents findings of a six-year investigation of young children learning to read. The book is divided into three major sections: Part I describes the rationale, design, and procedures; Part II presents some of the findings in the form of a theory about the nature of beginning reading as well as the resources children bring to bear in learning how to read; Part III details case studies of four children. The research was conducted in a three-year pilot phase followed by a three-year operational phase. The pilot study utilized teachers and pupils from 12 schools in six localities, with 8 of the schools in New York City and Philadelphia. The research phase was restricted to 26 children in 13 classrooms in five schools. Data collection included 12 observations per child and a series of seven interviews with each child. Work samples and oral reading samples were obtained and analyzed. In addition teachers were interviewed at regular intervals throughout the year. Readers are referred in particular to Part II for a synthesis of findings.

Wells, Gordon. *The Meaning Makers: Children Learning Language and Using Language to Learn*. Portsmouth, NJ: Heinemann Educational Books, Inc., 1986.

Presents data from a longitudinal study of the evolving literacy process in 28 British children from the age of 15 months until the last year of their primary schooling. Case studies are reported on six children followed through age 10. Observations were made once every three months, ten for each child. At each observation, children's comprehension and ability to imitate the sentences in a simple story were assessed. Parent interviews were conducted also in order to obtain information concerning parents' views on bringing up their children.

Descriptions of children's oral language are presented and analyzed. It was found that although subjects came from different social classes, there was no difference in oral language ability upon entering school. Teachers' expectations were tied to pupils' social class and affected the opportunity allowed for communication in the early grades. The most important factor affecting school achievement was the child's knowledge of literacy upon entering school. Such knowledge was related to literacy factors in the home such as being read to, numbers of books in the home, and parental reading.

COCHRAN-SMITH, MARILYN. *The Making of a Reader*. Norwood, NJ: Ablex Publishing Corporation, 1984.

Conducts a year-long observational and case-study research in a nursery school. Fifteen children, ranging in age from 3 to 5, were observed for approximately 200 hours while engaged in activities related to reading and writing. In addition, parents were seen in their homes for interviews ranging from 45 minutes to two hours in length. Data were collected on both what children already know about print and how they came to know it. Among the author's many conclusions were the following: (1) Children knew that reading and writing were integral and meaningful parts of their everyday world; (2) Children knew that reading and writing were effective ways to accomplish many of their own purposes and to meet many of their own needs; and (3) Children were aware that reading and writing were used consistently in the major home, school, and community contexts that comprised their lives. Readers are referred to the book for the extensive findings reported.

KONTOS, SUSAN. Development and interrelationships of reading knowledge and skills during kindergarten and first grade. *Reading Research and Instruction*, Winter 1988, *27*(2), 13-28.

Observes longitudinally the acquisition of print awareness, reading subskills, and reading achievement. A sample of 63 kindergarten children was randomly selected and tested in the fall, winter, and spring of kindergarten and the spring of first grade. A battery of tests was used to assess print awareness, reading subskills, and writing skills. Additional standardized test scores were obtained through routine school testing. Print awareness and reading skills were both found to be correlates of reading achievement. The cross-lag correlation technique revealed that reading subskill measures predicted print awareness better than print awareness predicted reading subskill scores. It appeared that print awareness increased as a result of increased skill in decoding, suggesting that print awareness was not a prerequisite to reading achievement. Multiple regression analysis found the total score from the *Early Identification Screening Battery* to be the best predictor of readiness and reading achievement. Print awareness in kindergarten was not a significant predictor of first grade reading achievement.

TUNMER, WILLIAM E.; HERRIMAN, MICHAEL L.; & NESDALE, ANDREW R. Metalinguistic abilities and beginning reading. *Reading Research Quarterly*, Spring 1988, *23*, 134-158.

Completes a two-year longitudinal investigation of metalinguistic abilities in the beginning stages of learning to read. Initially, 118 children in Western Australia were tested at the beginning of first grade. At the end of first grade, the sample had decreased to 108, and 92 remained at the end of grade two. Children were individually administered the following: measures of phonological, syntactic, and pragmatic awareness, the *Letter Identification Test*, the *Concepts-about-Print Test*, the *Reading-to-Read Word Test*, the *Peabody Picture Vocabulary Test*, and a test of concrete operational thought. At the end of grade one the first six measures were readministered along with three subtests of the Interactive Reading Assessment System (IRAS): real word decoding, pseudoword decoding, and reaching comprehension. The three IRAS subtests were again given at the end of grade two. Teachers were interviewed relative to reading programs. The three metalinguistic awareness measures were significantly intercorrelated at the beginning and end of first grade with coefficients of about .45. The concrete operational measure was more strongly correlated with the combined metalinguistic awareness score than any other school entry variable in grade one. The combined metalinguistic score correlated .46 with phonological recoding and .40 with comprehension at the end of grade two.

Weiss, Maria J., & Hagen, Ranae. A key to literacy: Kindergartners' awareness of the functions of print. *The Reading Teacher*, February 1988, *41*, 574-578.

Assesses kindergarten children's awareness of print. The 110 five- and six-year-old children were individually interviewed using a 10-item informal measure, the *Functions of Print Test*, developed by the authors. Children were shown reading materials in a group of three items and were asked to identify the one named. An additional interview question asked, "Why do people read?" Analysis of results revealed that only one child did not recognize a storybook while a letter was identified by only 73% of children and a menu, by 56%. Responses to the reasons for reading were placed into six categories, with 41% falling into Reading/knowledge and 32% into Pleasure categories.

Roskos, Kathleen. Literacy at work in play. *The Reading Teacher*, February 1988, *41*, 562-566.

Analyzes 1,860 minutes of sustained pretend play of eight children videotaped over a six-month period for examples of reading and writing behavior. The children were ages four and five. A total of 41 pretend play episodes were found storylike when analyzed with a story grammar model. Literacy routines found included banking, mailing, dining out, phoning, and shopping.

Wells, Gordon. The learning of literacy. In Bryant Fillion; Carolyn Hedley; & Emily DiMartino (Eds.) *Home and School: Early Language and Reading*. Norwood, NJ: Ablex Publishing Corporation, 1987, 27-45.

Employs the technique of retrospective analysis in a study of 32 children at the end of their elementary schooling. The author's hope was to explain the causes behind the differences in their educational achievement. A composite overall achievement measure was derived on each child at age 10 based upon the following scores: reading, writing, vocabulary size, mathematics, and teacher assessment of study skills. Multiple regression analysis was then employed to determine the best predictors of overall achievement at 10 years from variables available from a previous assessment at age 7. Achievement in reading was the single best predictor ($r = .88$). A similar analysis to determine the best predictor of reading at age 7 resulted in two variables: Knowledge of Literacy at age 5 and Command of Oral Language at age 5. Knowledge of Literacy correlated .82 with reading achievement at age 7. The nature of the preschool experiences leading to knowledge of literacy was then explored, with the finding that listening to stories read aloud is an important element.

Anderson, Alonzo B., & Stokes, Shelley J. Social and institutional influences on the development and practice of literacy. In Hillel Goelman; Antoinette A. Oberg; & Frank Smith (Eds.) *Awakening to Literacy*. London: Heinemann Educational Books, 1984, 24-37.

Inquires into the sources of life experiences that lead to the development of literacy, particularly among ethnic minorities and the poor. Approximately 2,000 hours of observation over an 18-month period were used in collecting data. The average number of home visits per child was 34 and the average hours observed per child was 91. The preschool children (number not given) involved represented equally blacks, whites, and Mexican Americans. Observations were made at various hours of the child's waking day over the seven weekdays. From the more than 1,400 literacy events observed, an analytic framework was evolved including the following nine domains of literacy activity: daily living, entertainment, school-related activity, religion, general information, work, literacy techniques and skills, interpersonal communication, and storybook time. On the average, preschool children were involved in 7.5 minutes of literacy during every hour of observation. Most frequently literacy activities were involved in the domains of daily living, entertainment, literacy techniques and skills, and school-related activities. The patterns of activity by ethnic groups differed across the nine domains. White parents more frequently ($p = .07$) initiated activities that specifically communicated about the value of literacy or its techniques or skills. Overall white families involved print in their activities more frequently than did members of the other two groups, they did not spend as much time with each activity as did the other ethnic groups.

MANNING, MARYANN; MANNING, GARY; & CODY, CAROLINE B. Reading aloud to young children: Perspectives of parents. *Reading Research and Instruction*, Winter 1988, *27*(2), 56-61.

Obtains the perspective of parents about the experience of reading aloud to their children. The sample consisted of 190 parents who completed questionnaires in libraries and who agreed to be interviewed. Interviews were semi-structured, ranged from 10 minutes to over an hour in length, and focused on various aspects of what transpired during the oral reading. Most of the families began reading to their child by the time the youngster was two years old. Over 75% reported reading to their children several times a week or more. More than one-fifth reported that they read to their children to help them succeed in school. They had learned that reading aloud is important from various outside sources such as television, magazines, or books on parenting.

JACOB, EVELYN. Learning literacy through play: Puerto Rican kindergarten children. In Hillel Goelman; Antoinette A. Oberg; & Frank Smith (Eds.) *Awakening to Literacy*. London: Heinemann Educational Books, 1984, 73-83.

Describes Puerto Rican children's literacy activities during play and examines the role of these activities in learning skills and social behaviors associated with literacy. Observed were 29 children, 14 middle class and 15 lower class, with a mean age of 6-3. Children were observed in their homes between 9 A.M. and 6 P.M. during the period between kindergarten and first grade. Tape recorders and notes were used to obtain data. Four home observations were made, two about 15 minutes long and two about 30 minutes long. Primary female caregivers were observed twice. Literacy skill activities involved a wide range of behaviors including reading comic books and other printed materials alone, reading aloud with other people, counting objects, and copying words in a school notebook. About half of the literacy skill activities engaged in occurred during play. Three different kinds of literacy activities occurred during play: counting, reading, and writing. During play children also acted out social behaviors associated with using literacy in nonplay settings such as using shopping lists, prescriptions, and money.

IV-21 Studies on the reading process

TAYLOR, INSUP. Scripts and reading research. *Interchange*, Spring/Summer 1987, *18*(1-2), 78-88.

Discusses research on phonetic coding, eye movements in reading, and cortical processing in English, Chinese, Japanese, and Korean scripts. It is concluded that linguistic, cognitive, and cortical processing appears to be similar for people reading sentences and texts in different scripts; processing appears to be dissimilar for people recognizing individual symbols in different scripts.

Beck, Isabel L., & Carpenter, Patricia A. Cognitive approaches to understanding reading: Implications for instructional practice. *America Psychologist*, October 1986, *41*, 1098-1105.

Discusses recent theoretical advances in reading. First, efforts to construct a general model of the reading process were described. Second, traditional instructional issues in the development of word-recognition efficiency were discussed. Third, three topics central to the development of reading comprehension – vocabulary, comprehension process training, and background knowledge – were considered.

Harste, Jerome C. What it means to be strategic: Good readers as informants. *Reading-Canada-Lecture*, Spring 1988, *6*, 28-36.

Studies the strategies used by adults in reading a complex narrative text. Twenty doctoral students were asked to maintain a journal as they read an assigned novel. Journal entries were divided into introspective commentaries and categorized into codes or signifying strategies. Readers attended to a number of different reader codes, text codes, and context codes. A taxonomy was then developed for the range of codes found. Three major categories formed the taxonomy: Field (what's happening), Mode (channels of communication involved), and Tenor (social relationships). Of the 771 codes analyzed, 44% were categorized as Field, 34% as Mode, and 22% as Tenor. Analysis of the response types indicated that readers spent about one-third of their time varying their cognitive processes in terms of content and context, one-third of their time monitoring their in-process reading experiences, and one-third of their time being reflexive.

Afflerbach, Peter P., & Johnston, Peter H. What do expert readers do when the main idea is not explicit? In James F. Baumann (Ed.) *Teaching Main Idea Comprehension*. Newark, DE: International Reading Association, 1986, 49-72.

Studies the processes fluent adult readers use as they try to extract or construct the main idea of texts when main ideas are not stated and when information is unfamiliar and difficult. Subjects, graduate students and professors, did think aloud protocols as they read articles from a wide variety of professional journals. Examples from the data are used to demonstrate first the general strategies they used for main idea construction, second the cues and strategies they used to determine what was important, and third how they managed their limited memory resources as they participated in the task. How attitudes, opinions, attributions, and beliefs enter the processes of main idea construction are also shown in the examples.

Langer, Judith A. *Children Reading and Writing: Structures and Strategies*. Norwood, NJ: Ablex Publishing Corporation, 1986.

Examines, through observations and self-reports, the cognitive activities engaged in by children when writing or comprehending various kinds of text. Data from intensive case studies of 67 children ages 8, 11, and 14 were collected and analyzed. Included in the data were interviews, recall tasks, reading passages and writing prompts, think-aloud and retrospective reports, probe questions, and text-based questions tied to specific passages. Random assignment was made to either the think-aloud or the retrospective condition. Children were seen individually for five separate sessions of about one hour each. The first session was used to obtain background information and to train children in either the think-aloud or retrospective procedure. The next four sessions were used for story writing, story reading, report writing, or report reading activities using the think-aloud or retrospective procedure. Variables included age, mode (talk-aloud, retrospection), genre (story, report), domain (reading, writing), and task difficulty (easy or hard passage sets at age 11). Writing and reading were seen as serving different purposes in children's lives. Generally, children were rated less competent as writers than as readers, and were felt to enjoy writing less. The uses to which reading and writing were put made a difference in what children recalled after reading and in how they organized their messages in writing. Even the youngest children differentiated between the uses of exposition and story writing. Considerable growth occurred in overall organizational and in surface linguistic structures with age. In both reading and writing, children's primary concern was with the meanings they were developing. Behaviors were varied and complex, changed with age and difficulty, and varied consistently between reading and writing.

AFFLERBACH, PETER. Variables influencing importance assignment. In John E. Readence & R. Scott Baldwin (Eds.) *Research in Literacy: Merging Perspectives.* Thirty-sixth Yearbook of the National Reading Conference, 1987, 127-134.

Examines the influence of four variables (text structure, emotional response to content, prior knowledge, and perceived author) on six undergraduate college students' assignment of importance ratings to six different texts: one essay, one letter, one article from *Newsweek*, two poems, and a two-page excerpt from a textbook. Subjects read each text aloud and gave concurrent verbal reports of the processes they used to assign importance. They performed a Likert-scale rating of the influence of the four variables on the importance assignment processes and gave retrospective reports on their purposes for reading. Protocols were analyzed qualitatively. Prior knowledge, emotional response, and perceived author were rated as having a statistically significant influence on importance assignment. No statistically significant differences were found for text structure influence on importance ratings. Ratings varied with the different texts rated and with the readers' uses for reading, indicating that competent readers are flexible in the standards they set for assigning importance.

RASINSKI, TIMOTHY V. Elementary grade readers' identification of levels of importance in expository texts. *Journal of Research and Development in Education*, Winter 1988, *21*(2), 9-15.

Proposes to determine if third- and fifth-grade children of different reading abilities differ in the ability to prioritize information read in expository texts. Subjects were 75 grade-three and 62 grade-five pupils identified as of high, middle, or low reading ability based on *Gates-MacGinitie Reading Tests* scores. Two passages, one from a fourth-grade social studies textbook and one from a sixth-grade text, each about 500 words in length, were parsed into idea units which were then rated for importance by adults. Each pupil read orally and then silently the passage written at one grade level about his/her placement and was asked to rate 11 items as high, middle, or low in importance. At both grade levels, good readers were better able to prioritize information. In addition, there was a developmental trend in ability to perform the task. Within each achievement level, fifth graders outperformed third graders.

KULHAVY, RAYMOND W., & KARDASH, CAROL ANNE M. Studying study: An analysis of instructional encoding behavior. *Educational and Psychological Research*, Winter 1988, *8*, 25-37.

Examines the overt and covert study activities of college students. A sample of 145 undergraduate students was given ten minutes to study a 1,096 word expository text in preparation for a test. After studying the text, students indicated the value of selected study behaviors by responding to a Likert scale of 13 overt and covert study strategies that had been selected from the research literature. Mean ratings were calculated for the study behaviors. A factor analysis of the relations among study behaviors revealed four factors. Factor 1, which accounted for over one-third of the total variance, represented a written encoding factor and included such behaviors as writing an outline, writing important points, and writing a summary. Factor II was labeled relational encoding and appeared to be cognitive in nature. It included internal strategies commonly grouped under models of schema, imagery, and depth of processing. The third and fourth factors appeared to be influenced by the type of passage to be studied. Factor III was a general rehearsal factor which included self-questioning, mental repetition, and rereading. Factor IV was labeled specific rehearsal since it included only selective rereading and underlining of important points.

BINTZ, WILLIAM. Reading for test-taking: A teacher-researcher looks at college students' beliefs and assumptions. *Ohio Reading Teacher*, October 1987, *22*(1), 6-12.

Describes the strategies six undergraduates employed while reading to prepare for tests, and their beliefs and assumptions about this form of reading. No instruction in strategies was given prior to the two-week data collection. Subjects: 1) completed an open-ended reading questionnaire to elicit beliefs, assumptions, and strategies; 2) wrote two retrospective reports about their prereading, during reading, and postreading behaviors over a psychology and a sociology chapter; 3) participated in informal interviews to clarify and extend their responses, and 4) read a rough draft of the research report prepared by the researcher to clarify and verify their information. Data were searched for recurring patterns. Based on recurring responses, nine patterns emerged: reading is a linear process; reading is a low priority; recall is more important than comprehension; reading represents a search for main points and specific answers to potential test questions; reading comprehension and recall are influenced by affective responses; reading is successful when testable items are picked up from the text; reading is time consuming; information from the text should be applied to test taking; and good readers exhibit different reading behaviors than poor readers.

WANDERSEE, JAMES H. Ways students read texts. *Journal of Research in Science Teaching*, January 1988, *25*, 69-84.

Sought to determine the study strategies college students use when reading a new chapter in a textbook and whether their strategies change in response in text content and type of evaluation. A sample of 133 undergraduate education majors, stratified by grade level, was administered the *Preferred Method of Study* questionnaire, a project-developed instrument that grew out of a series of clinical interviews. It was found that the greater number of passes students made in reading new textbook material, the more likely they were to have a high grade point average. Female students were more likely to use a single study strategy than males. Less than half of the students used self-constructed aids, such as outlines. Another finding was that students were more likely to alter their study strategies based on the type of test they would face than on the text content. Only 6% of the students made a conscious effort to link new concepts with prior knowledge. No relation was found between grade level and study strategies used.

CIOFFI, GRANT. Relationships among comprehension strategies reported by college students. *Reading Research and Instruction*, Spring 1986, *25*, 220-231.

Designs a study to determine the frequency with which college students reported using selected comprehension strategies and explores the relations among the strategies. Three introductory composition classes with an enrollment of 52 students were used. Students read a 1,000-word passage on social anthropology, took a 13-item multiple-choice test over the text, and then responded to the *Reading Strategies Questionnaire*. The latter was a 19-item instrument which asked respondents to rate on a six-point scale strategies they had used in reading the text and strategies ordinarily used. A cluster analysis procedures was employed to study the relations among the 19 strategies. Results of the cluster analysis indicated that readers may employ any one of a variety of subsets of reading strategies, with each subset containing a limited number of activities. High frequency strategies reported consisted of rereading, using contextual analysis, setting goals, underlining key sections, using imagery, employing textual aids, and paraphrasing and recalling text.

BROZO, WILLIAM G., & CURTIS, CAROL L. Coping strategies of four successful learning disabled college students: A case study approach. In John E. Readence & R. Scott Baldwin (Eds.) *Research in Literacy: Merging Perspectives*. Thirty-sixth Yearbook of the National Reading conference, 1987, 237-244.

Presents selected findings from four junior and senior college students who were previously identified as learning disabled and who had received special education support services during high schools. The four students met with the researchers for three one-hour sessions. Interview data were collected at the first session and verbal reports on reading comprehension and summarizing strategies were collected at sessions two and three. Subjects read two college level passages from the *Advanced Reading Inventory*. On one passage they read orally, stopping to think aloud and reflect on their processes after every sentence. On the second passage, they constructed a written summary and verbalized their thought processes as they wrote. Data are reported as examples taken from the taped transcriptions of the sessions. Examples document the use of word attack strategies, text structure cues, prior knowledge, different approaches to text, and knowledge of macrorules for summarizing. Statements illustrating attributions and coping strategies are included.

HIGGINSON, BONNIE C. An investigation into the self-selected study strategies used by college bound secondary students; Implications for the college reading specialist. *Journal of College Reading and Learning*, 1987, *20*, 24-29.

Attempts to identify the effect of prior knowledge on the self-selected study strategies used in history and chemistry. Subjects were 79 high school juniors who tested at or above grade level in reading on the *Comprehensive Test of Basic Skills*. Students read two 1,300- to 1,600-word passages in each content area, one designated as familiar and one as unfamiliar. A 10-item multiple-choice test on each passage followed one day later. Students then were asked to describe in writing the methods or ways they used in studying. Next a 12-item forced-choice inventory, developed to obtain information on study strategy usage, was given. Responses to the open ended question were tallied and grouped into the following four patterns: (a) skim or read parts of the passage, (b) read or read and memorize, (c) read and review or read and reread, and (d) multiple strategies. The forced-choice inventory responses were grouped into four patterns also: (a) skimming or reading parts of the passage, (b) reading only, (c) reading and thinking activities, and (d) reading and physical activities. The analyses revealed that students did not appear to differentiate their study strategy based on either level of familiarity or content.

TRABASSO, TOM, & VAN DEN BROEK, PAUL. Causal thinking and the representation of narrative events. *Journal of Memory and Language*, October 1985, *24*, 612-630.

Reanalyzes the stories and data from several previous studies of story comprehension to investigate the roles of the story-grammar category of events, the presence or absence of events in a causal chain, and the number of relations an event has to other events (causal connectivity) in facilitating prediction of memory for stories. Reanalysis determined causal networks, causal chains, causal connections, and categories of the story grammar classification system in the original data. These findings were subsequently examined for their effect on immediate and delayed recall, summarization, and judged importance of events. Multiple regression analyses were used to compare the properties of these networks with common story grammar categories. Placement in a causal chain and the number of causal connections of an event accounted for much of the common and unique variance, while unique variance was found for the story grammar category of events. substantial overlap existed between the events category and the causal factors. Concreteness, serial position, and argument overlap failed to account for the unique variance in the data. Growing out of the analyses, the researchers proposed a recursive transition model that integrates story grammar, causal chain, causal network and hierarchical problem solving approaches to story representation.

Flores d'Arcais, Giovanni. Syntactic processing during reading for comprehension. In Max Coltheart (Ed.) *Attention and Performance XII: The Psychology of Reading*. Hillsdale: Lawrence Erlbaum Associates, 1987, 619-633.

Concerns itself with a series of three experiments investigating the amount of syntactic computation performed during reading. Various types of violations were introduced in sentences and texts and the effects on reading behavior observed. Violations were of the following types: (1) spelling errors of one of the words in the text or the use of a nonsense word, (2) syntactic violations, and (3) semantic violations. In Experiment 1, 20 paid volunteer Dutch undergraduates were presented 48 Dutch sentences or short prose passages on a screen. Sentences were presented one word at a time in a self-paced presentation. Materials were correct or could contain one of the violations; each sentence was followed by a question about content, and subjects were to report the violations immediately after the end of the sentence. In experiment 2, materials consisted of 48 short narrative passages, 24 of which were fillers and 24 were critical. Of the latter, 12 contained a syntactic violation and 12 a spelling error or a nonword string of letters. Passages were characterized by three levels of pragmatic cohesiveness, low to high. The 16 Dutch university students who served as subjects saw the passages on a screen, one sentence at a time, under a self-paced condition. They were requested to answer a question about content and to report any errors immediately after the end of a passage. Experiment 3 called for the same error report task as Experiment 2, but material was presented at 450 words per minute. Subjects were 40 Dutch students designated as good and poor readers on the basis of comprehension scores. In Experiment 1, during rapid word-by-word reading, violations remained largely unnoticed. In Experiment 2, subjects were better at reporting spelling errors than syntactic violations. Reporting syntactic violations was easier with less coherent texts as compared to well-integrated ones. In Experiment 3, good readers were significantly poorer in reporting syntactic violations than poor readers. Good readers demonstrated a tendency towards a poorer performance in detection of violations with coherent text and towards a better capacity in reporting violations with inconsistent text.

Danks, Joseph H.; Bohn, Lisa; & Fears, Ramona. Comprehension processes in oral reading. In G.B. Flores d'Arcais & R.J. Jarvella (Eds.) *The Process of Language Understanding*. New York: John Wiley, 1983, 193-223.

Manipulates various combinations of lexical, syntactic, semantic, and factual information in an investigation of how different kinds of information interact in language processing, particularly lexical access and sentence comprehension components. Three experiments are reported, each using 40 undergraduates as subjects. In Experiment 1, four versions of a 2,200-word story were constructed so that there were four manipulations of four critical words: three types of violation (syntactic plus semantic, syntactic only, and semantic only) and a control condition. One violation of each type appeared in each section of the story. Counted as major disruptions as subjects read orally were: pauses of at least one second duration, substitutions, omissions, reversals, stammerings, mispronunciations, repetitions, and regressions. Only one disruption per word unit was tallied. Both syntactic plus semantic and semantic only violations yielded lengthened oral production times before the critical word was pronounced. Both violations were disruptive also after the critical word was produced. Violation of factual information did not hinder lexical access but was disruptive after the critical word had been uttered. Experiment 2 was similar to Experiment 1 but the syntactic plus semantic violation was replaced with a syntactic only violation. In Experiment 3, 15 noncontiguous paragraphs from a novel were used. Four different versions of each paragraph were prepared. Each critical word was changed to obtain a lexical, syntactic plus semantic, or semantic violation or it was left as an unchanged control. In Experiment 2, syntactic and semantic violations both produced increased production times beginning at the critical word and continuing through two and three word units. The syntactic disruption declined faster. Half of the syntactic disruptions were restorations of the correct form of the base word. In Experiment 3, both lexical and syntactic plus semantic violations lengthened production times at the critical word and disruptions continued through the second word after the critical word. Most lexical disruptions were pauses for pronouncing the nonword. Unlike the first two experiments, the semantic violation did not disrupt until after the critical word had been read.

MULCAHY, PATRICIA I., & SAMUELS, S. JAY. Problem-solving schemata for text types: A comparison of narrative and expository text structures. *Reading Psychology*, October-December 1987, *8*, 247-256.

Offers a position statement on reading as a type of problem solving. Through the use of research and theory, it was argued that knowledge of text structure influences comprehension. Narratives are often characterized by story grammars, whereas, expository text usually reflects different types of organization (collection, causation, response, comparison, and description). A problem solving model of writing was applied to reading in an effort to show how readers use problem-solving schemata. The implications of this theoretical position for instruction were briefly discussed.

BLACK, MARIA; COLTHEART, MAX; & BYNG, SALLY. Forms of coding in sentence comprehension during reading. In Max Coltheart (Ed.) *Attention and Performance XII: The Psychology of Reading*. Hillsdale: Lawrence Erlbaum Associates, 1987, 655-672.

Studies, in three experiments, the effect of verb gap on the ability to detect semantic anomalies in sentences. In Experiment 1, 10 female university students were shown 140 sentences, half of which were considered to be semantically anomalous and half acceptable. Thirty were filler sentences; the remaining 110 all consisted of two clauses with a verb gap in the second clause. Anomalies arose because of an incompatibility between the verb and the object of the second clause. Subjects viewed sentences on a microcomputer screen and were to press a YES key when the sentence was appropriately formed and a NO key when it was anomalous. Sentences included 12 conditions such as homophone of the verb, homograph of the verb, and number match/mismatch. A second experiment, also with 10 university of London female students, was conducted with 80 sentences. Again, all consisted of two clauses with a verb gap in the second clause. The verb in the first clause was always in the past tense. Sentences represented eight conditions including number match and mismatch. Experiment 3 again used 80 sentences and the same number of subjects. Also there were eight conditions for the sentences. Anomalous sentences were so because of the relation of the first-clause verb to the subject noun phrase in the second clause. Anomaly detection was slower and less accurate for sentences where a homophone of the verb would have given an acceptable sentence. Processing was also poorer when the verb and its gap differed in number, even when past tenses, where singular and plural verbs did not differ in phonology, were used.

ZABRUCKY, KAREN, & RATNER, HILARY HORN. Children's comprehension monitoring and recall of inconsistent stories. *Child Development*, December 1986, *57*, 1401-1418.

Assesses third- and sixth-grade children's comprehension monitoring and recall of inconsistent stories. Children were videotaped as they read four stories, presented one sentence at a time. Two aspects of comprehension monitoring were investigated. Comprehension evaluation was assessed through on-line (reading times) and off-line (verbal reports) measures. Comprehension regulation was assessed by measuring look-backs during reading. Children read sentences containing inconsistencies more slowly than control sentences. Sixth graders detected more inconsistencies and looked back more frequently than third graders. Recall and recognition memory were affected by text inconsistencies, with more recall for incongruent than congruent text. Distance between target sentence and context sentences affected recognition, recall, and overall reading times. Little relation was found between measures of evaluation and measures of regulation for sixth graders, but there was a significant relation for third graders. The results suggest the need to treat comprehension monitoring as a set of multidimensional processes, rather than a unitary construct.

YARBROUGH, DONALD B., & GAGNÉ, ELLEN D. Metaphor and the free recall of technical text. *Discourse Processes*, 1987, *10*(1), 81-91.

Investigates whether there are differences between metaphoric and literal language processing in context, whether metaphor facilitates or interferes with memory for technical information, and whether processing differences influence memory of the passage surrounding the metaphoric text or only show up in memory for metaphorically presented information. Subjects, college students in undergraduate psychology courses, read one of eight five-paragraph passages, wrote down what they remembered after reading, and reported the time it took them to read the passage. The target paragraph occurred either high or low in the content structure of the passage, contained either literal or equivalent metaphoric sentences, and was surrounded by literal or equivalent metaphoric sentences. More information was remembered when the target paragraph was more important in the text hierarchy and when the context did not contain metaphors. Recall of literal target text varied with text importance. Recall of metaphoric target information did not change as a function of position, and participants often recalled the information and the metaphor without integrating the metaphor into the context of the rest of the paragraph. It was suggested that metaphors in text are processed differently from literal language, and a two-step processing model might be appropriate for explaining the necessary cognitive processing for metaphoric language.

STEVENSON, ROSEMARY J., & VITKOVITCH, MELANIE. The comprehension of anaphoric relations. *Language and Speech*, October-December 1986, *29*, 335-360.

Designs three experiments testing the proposition that reference assignment is delayed, that is, interpretation is not completed, until some point after the reference term has been read. Subjects numbered 40, 36, and 40, respectively, in the three experiments, with those in the first two experiments consisting of staff and students at a university while subjects in the third experiment were undergraduate students. Participants read sentences containing either pronominal or eilliptical references. Manipulated was the point at which pragmatic inferences could be used. Findings indicated that subsequent content influenced both assignment times (Experiments 1 and 2) and reading times (Experiment 3). The results held for unambiguous elliptical references as well as for both ambiguous and unambiguous pronouns. The findings support the notion that assignment is delayed, allowing subsequent content to influence the process. The authors suggest that delayed assignment occurs whenever information needed to complete the processing must be retrieved from elsewhere in the sentence.

O'Brien, Edward J.; Duffy, Susan A.; & Myers, Jerome L. Anaphoric inference during reading. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, July 1986, *12*, 346-352.

Presents three experiments studying probe response time to anaphoric noun phrases. In all three experiments, subjects were undergraduates (n = 48, 64, 32) who participated for course credit. In Experiment 1, a series of 24 texts were constructed, ranging from 11 to 22 lines in length. In each, an early sentence introduced a noun which was designated as the target antecedent. Final sentences were written for each text with the last line always containing a key adjective-noun phrase in one of three conditions: reinstatement, semantic control, and baseline control. Immediately after the last line of each text, the target item was probed using a recognition task. In Experiment 2, target items were probed using a naming task. Subjects responded faster when the last line contained an anaphoric reference to the target item than when the last line referred to a different item from the text. The final experiment indicated that previous evidence for reinstatement reflected interference from a change of topic in the last line rather than facilitation due to reinstatement of the probed item.

Gibbs, Jr., Raymond W. On the process of understanding idioms. *Journal of Psycholinguistic Research*, September 1985, *14*, 465-472.

Reviews research studies to argue that people do not analyze the literal meanings of idiomatic expressions before or simultaneously with their comprehending of the expressions. Among the arguments cited are that many idioms lack well-defined literal meanings; that processing times are not longer, as they would have to be if subjects had to comprehend the literal expression first; that recall of literal uses of idioms has been facilitated by the hearing of idiomatic prompts; that people automatically comprehend the figurative meanings of idioms and don't need to process literal interpretations at all; and that people do not carry all the possible meanings of the words in an idiom to construct its literal interpretation. Suggests that these arguments call into question the psychological validity of the Lexical Representation Hypothesis of simultaneous computation of meaning, and implies that a more complicated model may be necessary to explain the processing of idiomatic expressions.

Shanahan, Timothy, & Lomax, Richard G. A developmental comparison of three theoretical models of the reading-writing relationship. *Research in the Teaching of English*, May 1988, *22*, 196-212.

Discusses and compares three alternative theoretical models of the reading-writing relationship. The models are then evaluated on the basis of their ability to account for the relationships found in reading and writing data collected from 69 beginning readers and 137 proficient readers. Pupils were given the appropriate levels of the Vocabulary Test and the Phonetic Analysis Test of the *Stanford Diagnostic Reading Tests*, the Reading Comprehension Test of the *Gates-MacGinitie Reading Tests*, and a limited cloze test. In addition, children completed a grade-level-appropriate spelling test and wrote two stories which were analyzed for mean T-unit length, vocabulary diversity, and the existence of various story grammar features. On the basis of comprehension and phonics scores, children were designated as beginning or proficient readers. On the basis of the chi-square goodness-of-fit index, the interactive model of reading-writing provided the best goodness-of-fit for these data.

Iwanaga, Masafumi. Children's predictions while reading a story – A focus on the characteristics of story schema. *The Science of Reading*, July 1987, *31*, 51-60.

Obtains predictions of Japanese school children as they read a story in order to determine the story schema held. Subjects were 71 second-grade, 78 fourth-grade, and 73 sixth-grade pupils. The common structural aspect across grades was the mentioning of the setting at the beginning of the prediction. At grade two, children's story schemata consisted of a structure with a repeated setting + episode. No strong relation between the two or between one episode and another was recognized. Story schemata for fourth graders often came in the form of one episode after another within a single setting, but with better recognition of relationships. For sixth graders, story schemata resembled that of fourth graders but were more flexible.

PADRON, YOLANDA N., & WAXMAN, HERSHOLT C. The effect of ESL students' perceptions of their cognitive strategies on reading achievement. *TESOL Quarterly*, March 1988, *22*, 146-150.

Elicits pupils' perceptions of the cognitive strategies they use while reading and studies the relation with reading achievement. Included were 82 third-, fourth-, and fifth-grade pupils randomly selected from a population of Hispanic English as a Second Language (ESL) children in one elementary school. The *Stanford Diagnostic Reading Test* was given in January and again in April to determine the relation between strategies cited and gains in reading comprehension. Following the April testing, the *Reading Strategy Questionnaire* (RSQ), a 14-item Likert-type questionnaire, was read to pupils. The RSQ requires respondents to indicate the extent to which a described strategy is used by checking (a) Always, (b) Sometimes, or (c) Never. The most frequently used strategies were asking questions about parts of a story not understood, checking through to see if all the story is remembered, imaging or picturing a story, and looking up words in the dictionary. Least checked was reading as fast as one could. Stepwise multiple regression analysis indicated that pretest achievement accounted for a significant proportion of the variance in posttest achievement. The strategy of thinking about something else while reading accounted for an additional 6% of the variance and showed a negative relation with posttest scores. The strategy of saying the main idea over and over accounted for an additional 1% of the variance and also had a negative effect on achievement.

THOMPSON, G. BRIAN. When nonsense is better than sense: Non-lexical errors to word reading tests. *British Journal of Educational Psychology*, June 1986, *56*, 216-219.

Presents data to examine non-lexical errors of 261 New Zealand children, average age 6½, reading a nationally standardized revision of the *Burt Word Reading Test*, an individually administered test comprising 110 words arranged in order of difficulty. Subjects read to a ceiling point at which 10 successive errors were made. All errors were classified as lexical (real words), non-lexical (nonsense words or pseudowords), or no response (failure to make a response to an attempted item). Scores are reported for the full sample (261) and for a restricted range (224), where subjects with very high and very low scores were excluded. For both restricted and full samples, there was a moderate positive correlation between words correct on the total test and the incidence of non-lexical substitutions. Thirty-nine percent of the subjects produced one or more non-lexical substitutions. Incidence of non-lexical substitutions was positively associated with level of reading progress, but lexical substitution errors were not. Data suggest that beginning readers of high reading progress made more attempts at phonological mediation than did children of low reading progress.

SCHMALHOFER, FRANZ, & GLAVANOV, DORIS. Three components of understanding a programmer's manual: Verbatim, propositional, and situational representations. *Journal of Memory and Language*, June 1986, *25*, 279-294.

Describes three studies which examine how verbatim, propositional, and situational representations of text are formed when undergraduates without prior domain knowledge read and study a computer programmer's manual for the first time. All materials were presented through the computer. In the first experiment, subjects were instructed to study for either text summarization (TS) or for knowledge acquisition (KA). Sentences were read significantly faster by those in the KA condition. Rates varied, suggesting that TS readers were using different processing models. Rates were calculated for each level of the text hierarchy. A levels effect was present for TS readers, but not for KA readers. In the second study, differences in cognitive structures were the focus, as subjects participated in a sentence recognition task with four types of sentences, differing in the contribution of the three cognitive structures. Findings were similar for both groups; however, for TS readers, verbatim representation differed significantly from propositional and situational representation, and for KA readers, only situational representation was different. In the third study, retrieval speeds were analyzed when there was an intervening task between the study and test phases. Subjects based their recognitions primarily on situational and propositional information, with more reliance on the faster situational information than the propositional information.

IV-22 Comprehension research

LUDLOW, LARRY H., & HILLOCKS, JR., GEORGE. Psychometric considerations in the analysis of reading skill hierarchies. *Journal of Experimental Education*, Fall 1985, *54*, 15-21.

Attempts to confirm the hierarchical taxonomy of reading comprehension skills. Two psychometric models were used for confirmatory analyses. The Guttman model was viewed as deterministic while the Rasch model was perceived as probabilistic. Comprehension items, based on a chapter in a novel, were developed using a taxonomy of comprehension skills. The items were administered to ninth-, eleventh-, and twelfth-grade students as well as graduate English students. An analysis of the response data found that the comprehension items fit the proposed hierarchical and cumulative structure, whichever model was used. Although both models yielded the same conclusions, the Rasch model was recommended when diagnostic information about student performance was being sought.

GUTHRIE, JOHN T., & KIRSCH, IRWIN S. Distinctions between reading comprehension and locating information in text. *Journal of Educational Psychology*, September 1987, *79*, 220-227.

Compares the cognitive processes involved in comprehending continuous text versus locating information in text. A sample of electronic technicians and electrical engineers completed a Reading Practice Inventory, a self-report survey designed to document the amount and type of reading they did. Subjects also took four project-developed tests created to reflect daily reading tasks. The tests consisted of comprehending articles, locating information in schematics, locating information in manuals, and locating information in articles. Results were analyzed separately for technicians and engineers. A factor analysis of reading activities, as reported in the Inventory, revealed four factors, two based on type of materials and two based on a combination of type of material and cognitive purpose. A factor analysis of the test results found two factors, Reading Comprehension and Locating Information, that correlated less than .20. Canonical correlations between reading activities (inventory results) and reading competence (test results) were not significant for either group. The results of the study suggest that Reading Comprehension and Locating Information are separate factors and that reading practice is multidimensional.

HAHN, AMOS L. Reading research: Can it improve comprehension instruction? *Reading Horizons*, Spring 1988, *28*, 192-200.

Reviews selected reading research under two major headings: (1) Teacher explanation versus teacher mentioning, and (2) Student control versus teacher control. Concludes that an explanation and modeling instructional sequence that gradually transfers responsibility for learning from the teacher to the pupil is appropriate.

Irwin, Judith W. Cohesion and comprehension: A research review. In Judith W. Irwin (Ed.) *Understanding and Teaching: Cohesion Comprehension*. Newark, DE: International Reading Association, 1986, 31-43.

Defines cohesion and coherence and reviews research relating various cohesive relations to comprehension. Concludes from the evidence that a highly cohesive text is usually more comprehensible than one that is not very cohesive. A bibliography of 64 entries is provided.

Zabrucky, Karen. The role of factual coherence in discourse comprehension. *Discourse Processes*, April-June 1986, *9*, 197-220.

Presents a set of three experiments investigating the effects of breakdowns in referential and factual coherence on text comprehension and recall. Experiment 2 was presented in two parts as 2a and 2b. All experiments used undergraduate psychology students as subjects and numbered 56, 56, 56, and 96, respectively. In Experiment 1, six versions of each of eight 10-sentence passages were constructed such that the content of all sentences except one, the context sentence, was the same across versions. The context sentence differed across versions to permit the relation between it and the final or target sentence to vary in four antecedent conditions: direct, indirect, incongruent, and no antecedent. In half of the versions, the context and target were adjacent (close); in the other half, they were nonadjacent (far). Each subject received seven passages, with each passage conforming to one of the seven experimental conditions. Each sentence in a passage appeared individually on a slide with subjects controlling speed of presentation. Reading times of target sentences and recall scores of target and context sentences were data of interest. Over all the experiments it was found that breakdowns in referential coherence produced by distant antecedent information hindered reading times of texts but not text recall; those produced by absent antecedent information hindered both. Breakdowns in factual coherence slowed reading times of texts and hindered recall when the comprehension goal was an integrative one, requiring subjects to update old knowledge with new information, but not when the comprehension goal was to accurately recall the texts.

Hammersley, Richard, & Read, J. Don. What is integration? Remembering a story and remembering false implications about the story. *British Journal of Psychology*, August 1986, *77*, 329-341.

Reports a series of three experiments that examine the effects of introducing misleading information on the recall of text. Three different theories of integration were tested: (1) *coexistence*, where integration does not occur and the correct original version is preferred; (2) *weak integration*, where misleading post-event information may be copied into the original event but subjects remember the misleading information as part of the misleading event and not the original version; and (3) *strong integration*, where misleading information is permanently transferred to the original version. University subjects were exposed to text as the original event followed by a misleading summary. Free recall of either the original story or the misleading summary was used as the measure of memory. Experiment 1 compared strong integration with the other two theories; Experiment 2 examined the effects of one week's delay; and Experiment 3 measured the effects of two weeks' delay. Misleading information was most effective when it had been presented recently and when the original information had been presented earlier. Subjects encoded and recalled the story and summary separately. Misleading information was integrated more when subjects had difficulty remembering the original story.

Flood, James, & Lapp, Diane. Getting the main idea of the main idea: A writing/reading process. In James F. Baumann (Ed.) *Teaching Main Idea Comprehension*. Newark, DE: International Reading Association, 1986, 227-238.

Presents a research-based set of procedures for instructing students in recognizing and generating main ideas in reading and writing. The procedures follow the Writing-Process model, with emphasis on the prewriting stage. Children generate a topic through an oral and written interview with the teacher. After pupils indicate their known knowledge on the form, they collect facts from other relevant sources. Children then select the most important information and synthesize that information into a single main idea or topic sentence on a theme composing form. The children complete the theme composing form by giving details to prove or expand the main idea. Teachers then guide pupils through the feedback, rewriting, and editing steps in the writing process model. Emphasis is on helping the students understand that good texts have an organizational scheme.

Williams, Joanna P. Research and instructional development on main idea skills. In James F. Baumann (Ed.) *Teaching Main Idea Comprehension*. Newark, DE: International Reading Association, 1986, 73-95.

Describes a series of studies investigating how normally achieving children, learning disabled children, and adults comprehend the main ideas of expository prose. Paragraphs were short and highly structured, and subjects chose the best title from four or wrote one sentence expressing the main idea. When paragraphs had topic sentences or were highlighted, scores were high for both children and adults. Performance of the disabled children was not different from that of the normally achieving children. When anomalous sentences were introduced into the same paragraphs, subjects were able to detect them. When asked to add a sentence to the anomalous sentence paragraphs and then to determine main ideas or summaries, adults modified their judgments of the main idea of the paragraph, but the children did not. A model of concept identification growing out of these findings was tested with fourth and sixth graders. Increasing the number of examples did lead to better identification of the main idea of the paragraph for sixth but not for fourth graders. An instructional program to implement the model was taught in ten lessons to the learning disabled students. Five lessons stressed categorization, identifying specific topic, and writing summary sentences, using well structured paragraphs; five lessons used anomalous sentences in paragraphs. The instructional group performed better than the control, indicating that the instructional sequence was useful for helping students identify and construct main ideas.

Winograd, Peter N., & Bridge, Connie A. The comprehension of important information in written prose. In James F. Baumann (Ed.) *Teaching Main Idea Comprehension*. Newark, DE: International Reading Association, 1986, 18-48.

Reviews selected studies on the comprehension of important information in written prose. The focus is on: (1) fluent readers and how they identify and use important information, especially text structure and topicalization; (2) identifying developmental and individual differences affecting comprehension of important information; and (3) describing how less able readers can be helped to better comprehend important information. Flaws in past research and methodological issues involved in studying such a topic are cited, and issues for future research are identified.

LEWIS, ANNE BOVENMYER, & MAYER, RICHARD E. Students' miscomprehension of relational statements in arithmetic word problems. *Journal of Educational Psychology*, December 1987, *79*, 363-371.

Focuses on difficulties in comprehending relational statements in arithmetic word problems. Two experiments were conducted with 96 and 26 college students, respectively. In Experiment 1, 8 target and 16 filler arithmetic problems were to be completed in 35 minutes and all work shown. Target problems involved a compare and a direct variation step. Compare portions were consistent and inconsistent in each of the four computational processes. Errors were placed in one of the following categories: reversal (numerical operation of the first step was reversed), arithmetic, and goal-monitoring. Only the reversal errors were frequent. Analysis revealed that students were more likely to miscomprehend a relational statement when that necessary math operation was inconsistent with the statement's relational term; e.g., having to subtract when the relational term was "more than." The effect was magnified when the relational term was marked (e.g., less than) rather than unmarked (e.g., more than). For the second experiment, subjects were given information about the two variables and asked to generate a statement expressing the relation between them. Subjects tended to produce relational statements by using unmarked rather than marked comparative terms. Presented is a model of word problem comprehension that uses schemata as guides to comprehension.

SANDBERG, J.A.C., & DE RUITER, H. The solving of simple arithmetic story problems. *Instructional Science*, August 1985, *14*, 75-86.

Attempts to answer the question of how young children develop skills in the solving of simple arithmetic story problems. Criticizes current simulation models describing children's problem solving behavior as being too limited, and proposes five models to more adequately explain the diversity of children's patterns of performance with change problems. Change problems are three sentence schemes that describe a start set, a change from that set, and a result set. By changing the sentences, different problem types develop and difficulty increases or decreases. The notion of "repair" is built into the five models, suggesting how difficulties in problem solution can be overcome. The output of the five models is then compared to data obtained from 60 children, each working five change problems. The number and types of errors the models made were compared to the number and types of errors the 60 children made. Using a best fit procedure, children were hypothetically assigned to one of the models. Models were in close agreement with the empirical data and were capable of describing a wider variety of empirical data than the models previously cited in the literature.

MUTH, K. DENISE. Solving word problems: Middle school students and extraneous information. *School Science and Mathematics*. February 1986, *86*, 108-111.

Discusses the effects of including extraneous information on solving word problems in mathematics. Previous research was reviewed that showed that student's problem solving ability was significantly lower when solving word problems with extraneous information compared to solving similar problems without extraneous information. Problems with extraneous information also took significantly longer to complete. The author argues for the inclusion of extraneous information in word problems used for instruction and assessment so as to better reflect the real world of mathematics.

HAWES, KATHRYN S., & SCHELL, LEO M. Teacher-set pre-reading purposes and comprehension. *Reading Horizons*, Spring 1987, *27*, 164-169.

Assesses the effect on comprehension of three prereading purpose treatments: (a) written, (b) oral, and (c) no purpose (control). Third graders (n = 36) who scored between the 30th and 70th percentiles on the *Nelson Reading Skills Test* read three basal reader stories with illustrations deleted. One treatment was administered each week to each class, with all pupils receiving all treatments and all stories. Each story was followed by five questions designed to assess incidental learning and one question to assess intentional learning (the purpose given). No significant difference was found among groups for the intentional comprehension questions. However, both purpose treatments resulted in greater incidental comprehension scores than did the control treatment.

Bransford, John D.; Vye, Nancy J.; & Stein, Barry S. A comparison of successful and less successful learners: Can we enhance comprehension and mastery skills? In James Flood (Ed.) *Promoting Reading Comprehension*. Newark, DE: International Reading Association, 1984, 216-231.

Discusses several studies by the authors which viewed differences between successful and less successful fifth-grade readers in the degree to which they were able to comprehend text. Classroom teachers and standardized test scores were used to identify children who were relatively proficient at decoding but who differed in their abilities to understand and recall information from reading. The chapter is divided into three major sections. In the first segment, cognitive abilities that appear to undergird effective comprehension and recall are identified and discussed. The second section describes several studies by the authors in which they attempted to study differences between successful and less successful readers in approaching the problem of learning new information. The third section deals with helping less successful readers learn to learn.

Martin, Michael A., & Konopak, Bonnie C. An instructional investigation of students' ideas generated during content area writing. In John E. Readence & R. Scott Baldwin (Eds.) *Research in Literacy: Merging Perspectives*. Thirty-sixth Yearbook of The National Reading Conference, 1987, 265-271.

Investigates the effects of writing activities on the comprehension of content area materials. Participants were 13 average and above average 11th graders enrolled in an American history class. The study was conducted over three consecutive days during three 50-minute class periods. On the first day, students were asked to generate individual lists of ideas on the social studies topic. This was followed by a collective class brainstorming of all the ideas. Each subject then wrote on the topic. On the second day, the test passage on the topic was read and writings were revised to incorporate new information. On the third day, the writing assignment was again done, without the use of any aids. The three writing samples were then analyzed for sources of ideas and for the flow of ideas carried over the three writings. Results indicated that students synthesized information from various sources. The brainstorming session followed by writing enhanced ability to integrate prior knowledge and new information.

Janus, Raizi A., & Bever, Thomas G. Processing of methaphoric language: An investigation of the three-stage model of metaphor comprehension. *Journal of Psycholinguistic Research*, September 1985, *14*, 473-487.

Compares processing time for metaphoric and literal language. Eight paid college students were involved as subjects. Nine target phrases, each embedded in a target sentence, were identified. Each target sentence was assigned to two paragraphs. One paragraph was intended to induce a metaphorical interpretation of the target sentence and phrase; the other was intended to induce a literal interpretation. Additionally, there were 11 filler paragraphs. Subjects were randomly assigned to either a metaphoric or a literal interpretation condition and saw the paragraphs presented on a cathode-ray tube phrase by phrase. Metaphoric target phrases required significantly longer reading times than literal target phrases.

Clifton, Jr., Charles, & Ferreira, Fernanda. Discourse structure and anaphora: Some experimental results. In Max Coltheart (Ed.) *Attention and Performance XII: The Psychology of Reading*. Hillsdale: Lawrence Associates, 1987, 635-654.

Cites three experiments examining how pronouns and noun phrase anaphors are processed. Subjects were all undergraduates and numbered 32, 64, and 48, respectively. In Experiment 1, subjects read 48 short paragraphs divided into several segments which were presented one at a time on a video monitor. Each paragraph was followed by a single yes/no comprehension question and reading was self-paced. Each paragraph had four versions, one of which was read by each subject. In two versions, the antecedent for a pronoun was a syntactic constituent (two proper names conjoined as a noun phrase), and in the other two versions, the antecedent consisted of two proper names in different grammatical relations to a single verb. Also manipulated was whether the pronoun antecedent was in the same sentence as the pronoun or in the previous sentence. There was no effect of conjoined versus separated noun phrase antencedent; the interaction between conjoined/separated noun phrase and one/two sentences was also nonsignificant. In Experiment 2, 23 paragraphs were used with each one in eight versions. Experiment 3 used 14 stories in four versions. Both Experiments 2 and 3 examined the effects of topichood and distance between antecedent and pronoun on pronoun reading time. Pronouns with topic antecedents were read quickly, regardless of the distance. Additional analysis suggested that some sentences appeared to have more than one equally quickly accessed antecedent, suggested that discourse centers rather than topics are preferred antecedents for pronouns.

Gray, Mary Jane. Story grammars: Are they relevant for classroom teachers? *Reading Horizons*, Spring 1988, *28*, 157-164.

Reviews briefly research related to story grammar, particularly that relevant to reading teachers. Limitations of the procedure are noted as well as benefits and instructional implications.

Prince, Amber T., & Mancus, Dianne S. Enriching comprehension: A schema altered basal reading lesson. *Reading Research and Instruction*, Fall 1987, *27*, 45-54.

Alters the sequence of the traditional basal reading lesson and studies the impact upon comprehension. Subjects were 45 children in grades one through five, 22 of whom were taught using a traditional basal format and 23, using an altered lesson format. Children were matched for grade, sex, reading ability, and on whether or not they tended to be active or passive participants in learning. Materials were selected from four basal reading series. Three stories were chosen from the first half of each basal used. Teachers were instructed to place each group at the appropriate level in a basal series and to teach the three stories following the designated format. In the altered format, background knowledge was activated by providing the suggested enrichment activity at the beginning of the lesson instead of at the end. Both groups received the same instruction for preteaching vocabulary, introducing the story, and setting the purposes for reading; both answered the same comprehension questions following the reading of the story. The altered format group had a higher percentage of comprehension questions correct than did the traditional format group.

Mudd, Norma. Influences of the text and the reader's background knowledge upon responses to comprehension questions. *Reading*, July 1987, *21*, 125-134.

Examines the influence of background knowledge on readers' comprehension. The study used a sample of 168 novice readers, 72 adults and 96 children, ranging from 7 years to 7 years 11 months in age. The children were further classified as able and less-able readers.

All subjects read two short passages orally and responded to five open-ended questions. Responses were classified as "text-based" or "reader-based." No significant differences were found among the three groups' proportions. However, significantly more responses were reader-based for all groups. Further analysis revealed that both the adult group and the less able children had a higher proportion of reader-based responses than text-based responses.

HENK, WILLIAM A., & HELFELDT, JOHN P. In-process measures of ambiguous text interpretation: Another look at the influence of prior knowledge. In John E. Readence & R. Scott Baldwin (Eds.) *Research in Literacy: Merging Perspectives*. Thirty-sixth Yearbook of The National Reading Conference, 1987, 143-149.

Examines the effect of prior knowledge on the comprehension of a passage. Subjects included 29 music, 35 physical education, and 28 elementary education majors at a university. Subjects were presented one sentence at a time with a 14-sentence ambiguous passage. Following each sentence, subjects were asked what the passage was about and why they felt so. Across all three groups, the highest percentage of subjects changed their topic choice at least three times. There were no differences within or among groups with respect to degree and frequency of topic changes reported. About one-third of each group settled upon an indeterminate topic by the end of the passage, while 40% of physical education majors settled upon card playing and 41% of music majors concluded with a music interpretation.

LEE, JAMES F. Background knowledge & L2 reading. *Modern Language Journal*, Winter 1986, *70*, 350-354.

Examines the effects of three components of background knowledge on the comprehension of text by two third-year Spanish grammar classes (n = 32). Components studied were: (1) context, the presence (context) or absence (no context) of a title and picture page preceding the text passage; (2) transparency, the presence (transparent) or absence (opaque) of specific, concrete lexical items within the text which provide clues to the content; and (3) familiarity, the presence (familiar) or absence (novel) of prior knowledge or experience of the content. Subjects were randomly assigned to one of four treatment conditions: (1) context-transparent, (2) context-opaque, (3) no context-transparent, and (4) no context-opaque. Two short texts, one familiar and one novel, were prepared in each condition in Spanish. Written recalls were collected, and protocols scored for idea units recalled. It was found that all three components played some role in the way learners of Spanish read, comprehend, and recall. No one component affected recall uniformly across the other components. The interaction of the three components was complex. Recall of the familiar topic was improved when learners saw a title and a picture page. Recall of the novel topic was better in the absence of a title and picture page.

SAMUELS, S. JAY; TENNYSON, ROBERT; SAX, LYNN; MULCAHY, PATRICIA; SCHERMER, NANCY; & HAJOVY, HALYNA. Adults' use of text structure in the recall of a scientific journal article. *Journal of Educational Research*, January-February 1988, *81*, 171-174.

Examines the effect of knowledge of text structure on comprehension of scientific journal articles. Subjects were 143 juniors enrolled in an undergraduate educational psychology class. Two scientific texts were used, each in two conditions: canonical and noncanonical. The canonical condition text followed a properly structured scientific article structure; in the noncanonical condition, the text made sense but the expected sequencing of information was randomized. Students were assigned randomly so that half received instruction about text structure in scientific journal articles, and half received no instruction. A week after instruction, subjects were randomly assigned to read one of the articles and were asked to write all they could recall. Idea units recalled were scored. Subjects who received instruction on text structure and read the canonical text recalled more than any other group. Students receiving no instruction and reading noncanonical text recalled significantly fewer idea units than any other group.

SCHATZBERG-SMITH, KATHLEEN. The reading-writing connection II: Text structure and reading comprehension. *Research and Teaching in Developmental Education*, Fall 1987, *4*(1), 71-76.

Reviews briefly selected literature exploring the relation between comprehension and text microstructure. It is concluded that both research and theory support the presence of a link between the two.

BEAN, THOMAS W. Organizing and retaining information by thinking like an author. In Susan Mandel Glazer; Lyndon W. Searfoss; & Lance M. Gentile (Eds.) *Reexamining Reading Diagnosis: New Trends and Procedures*. Newark, DE: International Reading Association, 1988, 103-127.

Discusses research identifying various forms of text structure and their impact on student comprehension and recall. Research reviewed leads to the conclusion that teaching students to perceive a writer's structural cues aids comprehension and recall of text.

SEIFERT, COLLEEN M; DYER, MICHAEL G.; & BLACK, JOHN B. Thematic knowledge in story understanding. *Text*, 1986, *6*(4), 393-426.

Plans two experiments investigating whether undergraduates were able to understand, reproduce, and make similarity judgments predicted by a particular structure, Thematic Abstraction Units (TAU). Subjects numbered 56 and 36, respectively, in the two experiments. Students were shown three example stories based on the same TAU pattern and then asked to write a story that was similar. Example stories were written to exemplify one of nine TAU patterns. Each subject wrote one story for each of three TAU story sets. Story sets were randomly assigned to subjects. Overall, 82% of the stories matched a TAU. In Experiment 2, stories generated in Experiment 1 and based on six TAU groups were used. Six of each TAU type were used. Subjects were asked to sort the stories into groups with similar plots, and group the stories using any criterion they desired. It was suggested that 2 to 10 groups be formed. After sorting, students were asked to label each group with a short phrase describing the contents. Analysis resulted in six clearly defined clusters, each corresponding to a specific TAU, and a superordinate cluster involving three of the TAU structures. It was felt that the results showed students' sensitivity to thematic patterns and indicated that the thematic level of information could be used in judgments of similarity.

CORLEY, PATRICIA J. A developmental analysis of sentence comprehension abilities in good and poor readers. *Educational Psychologist*, Winter 1988, *23*, 57-75.

Explores individual differences in sentence comprehension. First, a multistage model of sentence comprehension was proposed. The model highlights the contribution of two competing views (the phonetic encoding hypothesis and the syntactic processing hypothesis) and describes the development of sentence comprehension strategies in normal children. Next, phonetic and syntactic deficits in poor readers were linked to immature sentence comprehension strategies. It was argued that poor readers over-rely on semantic processing and fail to develop the necessary phonetic and syntactic skills for interpreting more complex discourse.

KEENAN, JANICE M. Development of microstructure processes in children's reading comprehension: Effect of number of different arguments. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, October 1986, *12*, 614-622.

Addresses the effect of the number of different arguments in a text on the reading comprehension of 18 fourth graders and 18 sixth graders. Children were divided into high-ability and low-ability readers based on the median split on grade equivalent scores of the reading subtest of the *California Test of Basic Skills*. Materials consisted of eight paragraphs in each of history, science, and familiar experiences. Four paragraphs of each content contained four arguments (few-different passages) and four contained nine arguments (many-different passages). All paragraphs had 14 propositions and between 34-37 words. Subjects read each paragraph once, and then were to recall it verbally. Recall protocols were scored; mean reading times were recorded for content type and number of different arguments. The difference in reading time per proposition between many- and few-different argument passages was significantly greater for grade four pupils than for grade six pupils.

KOLKER, BRENDA, & TERWILLIGER, PAUL N. Visual imagery of text and children's processing. *Reading Psychology*, 1986, *7*(4), 267-277.

Collects validation data on an a priori imagery rating system of text. Involved were 65 fifth grade pupils. Materials consisted of 40 passages of 150 to 200 words each which were selected from eight basal series. A ratio of high- to low-imagery words was used to determine the imagery rating of a text. High imagery (HI) text consisted of ratio ranges 1:1.0 to 1:3.9 (high imagery: low imagery); low imagery (LI) text ranged from 1:6.0 to 1:9.0. Ten HI and 10 LI passages were identified, randomly ordered, and placed into a booklet. Three factual and three inferential questions followed each passage. Pictures depicting each passage were selected from another source. Children were asked to rank order pictures in the order in which they would like to read about them. Pupils read the selections and then responded orally to the questions. Correct responses to both types of questions were greater for HI passages than for LI passages. Interest was not significantly related to comprehension. It is concluded that the a priori rating of text differentiated between HI and LI text as reflected in comprehension scores.

BAUMANN, JAMES F. Effect of rewritten content textbook passages on middle grade students' comprehension of main ideas: Making the inconsiderate considerate. *Journal of Reading Behavior*, 1986, *18*(1), 1-21.

Seeks to determine if selections in content area textbooks can be rewritten to improve pupils' comprehension of the main ideas. Fifty-six fifth graders were assigned randomly to read four science textbook passages in either the original (inconsiderate) version or a rewritten (considerate) version. In the latter version, text was restructured in such a manner that hierarchically important ideas were explicit, prominent in text units, and cued visually. Each pupil read two passages in each version and answered one recognition and two recall questions assessing the main idea of each selection. Finally, they were asked to compare passages in terms of preference, ease of reading, and ease of answering main idea questions. No difference was found for the main idea recognition question, but performance on the recall questions favored the rewritten version. When asked which passage they preferred, 42% selected the rewritten versions and 58% the original ones. About equal proportions of pupils selected each version as easier to read and each version as easier to answer main idea questions.

SPRING, CARL. Comprehension and study strategies reported by university freshmen who are good and poor readers. *Instructional Science*, October 1985, *14*, 157-167.

Reports the ratings of frequency of use of 15 comprehension and study strategies by university freshmen previously identified as 21 good and 25 poor readers by their SAT scores and their scores on the *Sequential Tests of Educational Progress*. A reading strategy questionnaire modified from a previously researched instrument contained 8 comprehension strategies and 7 study strategies. Subjects read a passage from a college psychology textbook on the first day of the two day study. On the second day, subjects completed a multiple-choice comprehension test on the passage and the strategy questionnaire. Scores were combined and factor analyzed, with five factors emerging: critical reading, verbal rehearsal, understanding, written rehearsal, and figural rehearsal. Seven of the eight comprehension items loaded on critical reading or understanding; study strategies loaded on verbal rehearsal, written rehearsal and figural rehearsal. Underlining, which had been classified a comprehension strategy, had its highest loading on a factor predominantly associated with study strategies. Good readers had significantly higher factor scores on the understanding factor. Mean frequency ratings of good readers were higher than poor readers on four comprehension items; mean frequency ratings of good readers were lower on one study item, outlining text material.

MILLER, GLORIA E. The influence of self-instruction on the comprehension monitoring performance of average and above average readers. *Journal of Reading Behavior*, 1987, *19*(3), 303-317.

Examines the effectiveness of a self-instructional training strategy on comprehension monitoring performance. A sample of 52 fifth-graders were classified as either average or above average readers. Half of the pupils in each category were randomly assigned to a self-instructional (SI) or control didactic (CD) condition. All subjects were given an error detection pretest, 40 minutes of instruction, an immediate posttest, and a delayed posttest. SI pupils were taught a self-verbalization routine intended to promote comprehension monitoring while CD children received equivalent instruction without the inclusion of self-guided speech. A repeated measures analysis of variance found a significant main effect for treatment condition, reading ability, and test time. SI above average readers significantly outperformed CD above average readers. A similar pattern, although not significant, was observed for average readers. SI pupils also maintained their lead on the delayed posttest given one week after instruction.

MILLER, GLORIA E.; GIOVENCO, ANDREA; & RENTIERS, KATHERYN A. Fostering comprehension monitoring in below average readers through self-instruction training. *Journal of Reading Behavior*, 1987, *19*(4), 379-393.

Proposes to examine whether self-verbalization training would increase the comprehension monitoring performance of readers. Based on teacher reports and *Metropolitan Reading Test* scores, 24 above- and 24 below-average fourth- and fifth-grade readers were identified. An equal number of above- and below-average pupils was randomly assigned to either a self-instruction or control practice condition. Fifteen passages, each 9 or 10 sentences in length, were adapted from science and reading materials. Ten of the passages contained purposefully embedded errors, while five were filler passages with no errors. Two types of error passages were presented, each containing inconsistent information located in two nonadjacent sentences: (1) a contradiction error, and (2) a cohesion error. Children were trained individually in three 45-minute sessions. Self-instruction pupils were taught to employ a self-verbalization strategy through a four-step fading procedure. Controls were given equal exposure and practice with training materials. Following the third training session, pupils were tested on their ability to monitor and detect errors in nine test passages. Children read the passages orally and were asked to note any problems in the story. Two postreading multiple-choice questions followed each passage. Self-instruction pupils outperformed controls. Above average readers identified more direct errors than below average readers.

HARTMAN, DIANE M. Comprehension monitoring—research and application. *New England Reading Association Journal*, Spring 1987, *23*((2), 31-35.

Reviews selected research findings on reader differences in comprehension monitoring and on teaching readers how to monitor their comprehension. Some practical applications of the research findings to classroom instruction are also presented. Relative to individual differences in monitoring, the author concludes: (1) individuals who chunk material tend to be more successful readers than those who see text in pieces; (2) awareness that one is not comprehending may be a developmental process; (3) the more a reader actively processes material, the more likely comprehension will improve; and (4) good and poor readers differ in the manner in which they attend to text and in the strategies they use to clarify confusions. Two conclusions were drawn about teaching how to monitor. These are: (1) questioning seems a more effective technique than studying or rereading, and (2) training is more effective when done over several sessions.

MACDONALD, JOHN D. Self-generated questions and reading recall: Does training help? *Contemporary Educational Psychology*, July 1986, *11*, 290-304.

Studies the effect upon comprehension and recall of training junior high school pupils in question asking. Subjects were 28 seventh graders and 24 eighth graders. School records were used to obtain scores on the Reading Comprehension subtest of the *SRA Achievement Series* administered the spring prior to the study. The General Vocabulary subtest of the *Test of Reading comprehension (TORC)* was used to pretest reading vocabulary knowledge. The Syntactic Similarities and Paragraph Reading subtests of the TORC were used as posttest measures of comprehension. Subjects were randomly assigned to read one of two social studies passages as a pretest and the alternate passage on a posttest. While reading a passage, children were to write questions to assess another reader's comprehension of the text and then were to write free recalls of the passage. Questions were rated on a five-point scale on various criteria. Experimentals were given nine sessions of a five phase training program in generating questions. Controls received instruction and practice in using dictionary, a thesaurus, and in writing book reports. Posttests were given one day following the final training session. Training improved questioning skills only of those subjects with above average free recall ability on the pretest, although improvements in question quality were related to improvements in reading recall.

DERRY, SHARON J., & KELLIS, ALMINA. A prescriptive analysis of low-ability problem-solving behavior. *Instructional Science*, 1986, *15*(1), 49-65.

Describes the thought processes used by low ability soldiers and higher ability college students as they talked aloud while solving arithmetic word problems that were similar to those soldiers would need to solve in tests for career advancement. Eight enlistees who were enrolled in a remedial educational program and eight psychology undergraduates served as subjects. Each participated in an individual session with the examiner, completed two training talk alouds, and then worked the six experimental talk aloud problems. Subjects were allowed five minutes for each problem, and were prompted after 10 seconds of no response. If answers were incorrect within the allocated time, subjects were told of their error and urged to continue working. Structured interviews were recorded after each session. Answers were categorized into a 28 category coding scheme. College students outperformed soldiers on all tasks, taking less time, and making fewer errors. For both groups, most time was spent in clarifying and calculating. Based on results, a training module was developed which included goal identification and diagramming, selecting subgoals, schema identification, and self checking. Preliminary module testing indicated that the group receiving the problem solving prompts did better than the control group on near transfer to items of a similar nature but did not do better on far transfer to other types of word problems. Soldiers rated the training package favorably.

Brozo, William G., & Brozo, Carol L. Unskilled college readers' comprehension of connected and disconnected text. *Research and Teaching in Developmental Education*, Fall 1987, *4*(1), 21-26.

Summarizes a study determining the effects of logical connectives on developmental college readers' comprehension of text. Subjects, 44 sophomores enrolled in two sections of a college developmental reading course, read a text of approximately 1,000 words. Group 1 received the passage with intra- and inter-sentential connectives included. Group 2 had the passage without the connectives. After reading, all answered 26 text explicit and text implicit multiple-choice questions. The two groups had been pretested with a cloze comprehension exercise to assess their existing knowledge of connectives and their performance was not significantly different. Performance on the *Nelson-Denny Reading Test* was also similar. Results suggested similar performance for both groups on text explicit questions. Group 1, the group reading connected text, answered significantly more text implicit questions and significantly more of the total questions than did Group 2.

Glenberg, Arthur M.; Sanocki, Thomas; Epstein, William; & Morris, Craig. Enhancing calibration of comprehension. *Journal of Experimental Psychology: General*, June 1987, *116*, 119-136.

Explores the concept of calibration of comprehension (the correlation between subjective assessments of knowledge gained from reading and performance on objective tests) to try to determine why correlation between these assessments is usually close to zero. Reports eight studies conducted using undergraduates. Findings suggested several points concerning calibration of comprehension: poor calibration of comprehension is the rule, rather than the exception; poor calibration of comprehension is not associated with a particular type of performance test but is found with idea recognition tests, verbatim recognition tests, and inference tests; poor calibration is low when testing immediately after reading or after a testing delay; poor calibration may result from assessing familiarity with the general domain of a text instead of assessing specific knowledge gained from a particular text; and calibration can be enhanced if subjects are given pretests that are closely related to the processes and knowledge required on criterion testing. Subjects appeared to use feedback from the pretest to predict criterion performance.

Davey, Beth. Factors affecting the difficulty of reading comprehension items for successful and unsuccessful readers. *Journal of Experimental Education*, Winter 1988, *56*, 67-76.

Assesses the effects of passage features, question types, and question formats on the reading comprehension of successful and unsuccessful readers. A sample of 50 successful fifth- and sixth-grade pupils and 50 unsuccessful ninth- and tenth-grade students were matched on skill level (i.e., both groups scored between grade equivalents of 5.0 and 7.9 on the *Stanford Achievement Test*: Reading Comprehension). Twenty predictor variables (8 passage variables, 2 question type variables, and 10 question format variables) were examined. Scores on the SAT: Reading Comprehension subtest served as the criterion measure. Regression analysis examined the extent to which the predictor variables contributed to item difficulty. No significant differences between successful and unsuccessful readers were found for any of the predictor variables. Two features, location of response information and stem length, were significant joint predictors for both types of readers. None of the other variables, either alone or in combination, added significantly to the predictive power of these two variables. None of the passage features contributed significantly to item difficulty for either reader group.

Burrows, Julie, & Prescott, Lynda. Reading skills: The key to successful study. *Adult Education* (British NIAE), March 1987, *59*, 310-316.

Attempts to examine the types of reading problems occurring in adult students who were reading demanding materials. Subjects were two classes of miners in England who were enrolled in a day release course. Students were asked to read two difficult passages and to indicate on phrases within them the problems encountered as due to reading, meaning, or other. Subjects were asked to write summaries of the passages also. In individual sessions, students were asked to read the passages aloud. Problems that appeared difficult were grouped under four major headings: (1) Syntax problems, (2) Tunnel vision, (3) Rhetoric problems, and (4) Printing convention problems.

Yuill, Nicola, & Joscelyne, Trish. Effect of organizational cues and strategies on good and poor comprehenders' story understanding. *Journal of Educational Psychology*, June 1988, *80*, 152-158.

Reports two experiments investigating the effects of organizational cues on the comprehension of skilled and less skilled comprehenders. Subjects numbered 24 and 20 British primary school children in Experiments 1 and 2, respectively. In Experiment 1, the 12 less skilled comprehenders had reading accuracy ages which were above or equal to their chronological ages (CA), but comprehension ages at least a half year below their accuracy ages and below their CA. Skilled comprehenders were matched with less skilled on CA and accuracy age but had a significantly higher comprehension age. Children were presented eight abstract stories, each 50-70 words long, to read. Stories were prepared in four combinations of title and picture type: integrative or nonintegrative title, and integrative or nonintegrative picture condition. Recall and five comprehension questions were assessed. For comprehension, stories with integrative titles were understood better than stories with nonintegrative titles. Differences between picture types were significant for less skilled comprehenders only. For recall of main ideas, differences favored integrated titles and nonintegrated pictures, but not significantly so. In Experiment 2, half the children were given instruction with two stories in looking for clue words and half were in a control group. Children then read the stories from Experiment 1 without pictures or titles. Trained poor comprehenders showed better comprehension than did control poor comprehenders. No significant differences were found between trained and control good comprehenders.

V. The teaching of reading

V-1 Comparative studies

Stevenson, Harold W. Children's Problems in Learning to Read Chinese, Japanese and English. In Daniel Wagner (Ed.) *The Future of Literacy in a Changing World*. Oxford, England: Pergamon Press, 1987, 131-150.

Compares performance of Chinese, Japanese, and American children on a reading test developed for this study. In a second aspect of the report, mothers and teachers in the three countries were asked to discuss problems observed in children learning to read. The reading test was developed so that words, sentences, and paragraphs were comparable in difficulty and equivalent in grammatical complexity across the three languages. The test was individually administered. Numbers of pupils tested included approximately 280 from each country at kindergarten level, between 400 and 900 from each country at first grade, and between 450 and 950 from each country at grade five. Although differences were small, they were statistically significant. Chinese children had higher scores at all grade levels than did the other two groups on both vocabulary and comprehension. American children scored better than Japanese children in vocabulary. The percentage of children with severe reading problems was similar in all three countries. Achieving two or more years betow grade level at grade five were 2% of Chinese children, 3% of American children, and 8% of Japanese children. Chinese children spent more time doing homework and more hours per week in academic activities than did the others. American children were lowest in both these areas. Among mothers of fifth graders, 56% of Chinese, 75% of American, and 82% of Japanese said their child showed no problems in reading. In all three countries, the most common belief was that reading problems were related to the types of earlier training and stimulation the child had received. American teachers tended to overestimate the prevalence of severe reading problems. Teachers in all three countries tended to attribute reading problems to children's everyday experiences.

CAPUTO, JOHN S., & DURKIN, KEVIN. Initiation into literacy. In Malcolm P. Douglass (Ed.) *Claremont Reading Conference Forty-Ninth Yearbook*, 1985, 118-130.

Compares cross-national practices between England and the United States in initiating children into reading and writing. In English primary schools, the emphasis is on aiding children in becoming competent language users and communicators. A view of reading as a meaningful activity is stressed, and most teachers use a language experience approach. The typical approach in the U.S. is to stress letter/sound correspondence. In England, practice in writing begins at age five from the first day of school. It is felt that there is little effort in the U.S. to get children to write original material or language experience exercises. Rather, children begin with letter recognition and get little practice in letter formation except for discrete letters. English schools, unlike those in the U.S., have a consistent philosophical base about literacy.

APPLEBEE, ARTHUR N.; LANGER, JUDITH A.; & MULLIS, INA V.S. *Who Reads Best?* Princeton, NJ: Educational Testing Service, 1988.

Presents data based on the 1986 National Assessment of Educational Progress (NAEP) involving almost 36,000 enrolees in grades 3, 7, and 11 in public and private schools. While the data show an increase in reading proficiency with grade level, at each grade level whites performed better than their Hispanic and black peers, girls performed better than boys, and subjects from advantaged urban communities performed better than those from disadvantaged urban communities. At all grade levels, children had difficulty with evaluative and interpretive reading tasks. Proficiency in reading was related to general literacy experiences.

NAVARATNAM, K.K., & ASCHE, F. MARION. A cross-sectional analysis of college preparatory seniors of 1972 and 1980. *High School Journal*, February/March 1988, *71*, 127-134.

Compares two cross-sectional nationally representative samples of college preparatory high school seniors, those from 1972 with these from 1980, on tested achievement, educational and occupational plans, and post school activities. The 1972 sample included 1,708 seniors; the 1980 sample, 1,777. There was a 6.4% increase in the proportion of females from 1972 to 1980. The proportion of Hispanic and Asian students was approximately double and there was a 3.2% increase in blacks and a 5.2% decline in whites from 1972 to 1980. The proportion of students from high socioeconomic homes increased from 36.6% to 44%. There was a decline in vocabulary, reading, and math scores, but only the decline in vocabulary scores reached significance. In both years, over 60% aspired to professional jobs.

Mulrooney, Vincent J. National surveys of reading attainment in primary schools in Ireland. *Irish Papers Presented at Fourth European Reading Congress and Tenth Annual Conference of the Reading Association of Ireland*, 1985, 187-200.

Reports the results of two national surveys of reading attainment in Ireland. In the first survey, conducted in 1972, three standardized tests were administered to approximately 4,500 10-year old children. Questionaires were also used to collect demographic information and teachers completed ratings of parent interest. Although the tests correlated highly with each other (.81 to .85), the raw score distributions varied across tests and differed significantly from a normal distribution. Overall, Irish students scored about a year and one-half below their British counterparts. The ratings of parent attitudes agreed with the reading test results. In the second survey, conducted in 1980, two of the original three tests were administered to 2,381 children in fourth and fifth class. Results indicated that the fifth class performed betther than the fourth class, that girls scored higher than boys, and that the Irish pupils performed about six months below British pupils of comparable age. Comparisons were made between the results of the two surveys.

Trew, Karen. Reading standards in Northern Ireland. In Vincent Greaney & Brendan Molloy (Eds.) *Dimensions of Reading*. Dublin: Educational Company of Ireland, 1986, 77-87.

Gives comparative data on reading scores for 11- and 15-year-olds in Northern Ireland. Data from the 1972 and 1976 surveys of reading attainment among 11- and 15-year-olds carried out by the Northern Ireland Council for Educational Research were utilized to study changes in reading standards. Both surveys used the NS6 reading test developed by the National Foundation for Educational research in England and Wales. In both years, mean scores for boys and girls were almost identical. Mean scores for 15-year-olds were comparable across the two samples; however, a significant increase was noted among 11-year-olds for the total group and for boys separately. When compared with results from Wales in 1971, the mean score of 11-year-olds in Northern Ireland was significantly higher. The mean score for 15-year-olds in Northern Ireland fell below 1971 estimates for England and Wales. Five national surveys of reading and writing attainment were conducted by the assessment Performance Unit between 1979 and 1983 in England, Wales, and Northern Ireland. Representative samples of 8,000 or more 11- and 15-year-olds were included. Analyses revealed no significant changes in mean performance for either 11- or 15-year-olds between 1979 and 1983 in Northern Ireland. Results showed s significant improvement for both age groups in England and for 15-year-olds in Wales.

Ezzaki, Abdelkader; Spratt, Jennifer E.; & Wagner, Daniel E. Childhood literacy acquisition in rural Morocco: Effects of language differences and Quranic preschooling. In Daniel Wagner (Ed.) *The Future of Literacy in a Changing World*. Oxford, England: Pergamon Press, 1987, 159-173.

Presents data collected during the first three years of the Morocco Literacy Project which investigated literacy acquisition and retention in Morocco. In particular, this report focuses on the effects of preschool experience and language background of 166 first-grade rural Moroccan children. Children were followed for three years when 130 remained in the study. Four comparison groups were created: Quranic preschooled Arabic-speaking; Quranic preschooled Berber-speaking; non preschooled Arabic-speaking; and non preschooled Berber-speaking. A letter knowledge test, word-picture matching test, and sentence maze test were administered. Arabic-speaking children performed better than Berber-speaking children in all three years, although all differences were not statistically significant. Quranic preschooled children generally scored better than non-preschooled children.

V-2 Status of reading instruction

Conyers, John G. Report cards and reading levels. *Education*, Spring 1986, *106*, 295-299.

Discusses the results of a survey of reporting practices of large school systems. Over 100 school districts with populations ranging from 100,000 to 300,000 were asked to submit their report cards, describe their reporting system, and create grade reports for three hypothetical pupil scenarios. Most districts used a single letter grade or numerical marking system in reporting reading progress to parents. The reading competencies most often used on report cards were identified. The responses to the hypothetical scenarios were mixed and represented the whole range of possible scores or grades. A list of recommendations to be used in developing report cards was provided.

Chabe, Alexander M. The Russian school language program. *Reading Improvement*. Fall 1987, *24*, 171-175.

Examines the organization and content of the Russian school language program for grades 1 through 9 by studying Soviet academic and curriculum plans and by analyzing the state-mandated textbooks. Time allocated for language study decreases with the rising grades, while literature study increases. First graders have 12 hours of language instruction per week; 2nd and 3rd graders, 10 hours; 4th and 5th graders, 6 hours; 6th graders through 8th graders, 1 hour; and 9th graders, 1 hour. The first three grades emphasize the rudiments of the Russian language. Grades 4, 5, and 6 focus on phonetics and morphology. Grades 7 and 8 stress syntax and punctuation, and grade 9 studies linguistics and stylistics. All textbooks are organized around didactic principles and, according to Soviet educators, attempt to develop esthetic feelings and appreciation for the beauty of the Russian language. The reviewer concludes that the program is unified and correlated, and fulfulls its sociopolitical objectives.

V-3 Early reading

Durkin, Dolores. A classroom-observation study of reading instruction in kindergarten. *Early Childhood Research Quarterly*, 1987, *2*, 275-300.

Observes 42 kindergarten classes in order to find out what is done to prepare children for reading and to teach reading. In addition, the 29 teachers and 15 principals involved were individually interviewed to obtain explanations for instructional practices. Classes were each observed on two successive school days; observations totalled 233 hours. Five categories were used to describe how teachers spent their time: (1) Reading activities (10.8%); (2) Reading-related activities (10.8%); (3) Other academics (2.6%); (4) Logistics (50.8%); and (5) Miscellaneous (25%). Of the 1,513 minutes spent on reading activities, 70.9% went to topics related to phonics. Commercially prepared materials directed phonics instruction, and the content of these materials was reflected on report cards and in teachers' expectations. Whole-class instruction was the prevalent form with both morning and afternoon kindergarten groups receiving essentially the same instruction. Phonics instruction was only rarely found in the context of recognizing written words but rather was related to pictures and letters. In interviews, teachers equated phonics with readiness instruction rather than reading instruction. Data from interviews with principals suggested a lack of knowledge of kindergarten programs.

Fagan, William T. Emergent literacy: Avoiding the plateau effect. *Reading Horizons*, Summer 1987, *27*, 232-236.

Summarizes briefly research findings from selected sources on the nature of the environment in which preschool literacy information is acquired. A listing of 10 findings is presented.

FREEMAN, EVELYN B., & WASSERMAN, VIRGINIA. A will before there's a way: Preschoolers and books. *Reading Horizons*, Winter 1987, *27*, 112-122.

Attempts to determine whether there is a relation between early reading motivation and the home environment. A final sample of 17 preschool children and their parents were included. Subjects were all white, middle class children living with both parents. An observation check list was used to record instances of book related interaction and behavior during free time and story time over a three-week period. A 20-item questionnaire investigating the child's home literary environment was sent home to parents. A Pearson product-moment correlation coefficient of .507 was found between children's observation scores and scores of subjects' mother on the questionnaire; with fathers, the coefficient was .466 and for both parents, a coefficient of .781 was found. Girls demonstrated more reading behaviors than did boys.

V-4 Teaching reading – primary grades

CHANDLER, JUDY, & BAGHBAN, MARCIA. Predictable books guarantee success. *Reading Horizons*, April 1980, *26*, 167-173.

Ascertains the effectiveness of using predictable books versus basal readers in a reading lab with children in grades 1, 2, and 3. Experimental subjects numbered 25; controls, 23. Beginning in September, pupils were taken out of the regular classroom and provided with 45 minutes of supplementary instruction in a reading laboratory situation. Controls followed the basals in a sequential, step-by-step manner as presented in the manual. Experimentals were allowed to browse and choose from among any predictable books they wished to read. Appropriate levels of the *Metropolitan Achievements Tests* (MAT) in reading were administered the end of March as posttests. Pretests of the MAT were also used to pretest. Analysis of covariance revealed that pupils using the predictable books as a supplement improved significantly over the control group.

DULANEY, KATHY H. Improving word recognition ability through spelling. *Reading Improvement*, Fall 1987, *24*, 163-166.

Investigates the utility of teaching pupils to spell high-frequency words taken from the basal reader as a means of improving word recognition. Subjects, 38 pupils from first and third grade, were assigned to one of two treatment conditions: (1) basal reading supplemented with games and puzzles designed to increase word recognition, and (2) basal reading supplemented with instruction in spelling. Those receiving spelling were given approximately 75 minutes of instruction with the basal reader words per week. Words were presented in a list, and a procedure of visual, auditory, and kinesthetic processing was used. Each week words were reviewed, and spelling tests were given and corrected by the pupils, with teacher direction. Teachers kept logs of daily instructional procedures. After four months of study, a word recognition test of the high frequency words taught was administered. Both first-grade and third-grade pupils in the spelling condition scored higher on the word recognition test than those receiving the word recognition activities.

PAULS, LEO W. An investigation into the effects of two sequences used to teach selected comprehension skills to second-grade students. *Florida Reading Quarterly*, June 1988, *24*(4), 5-7.

Evaluates the effects of two instructional sequences for teaching comprehension skills. A sample of 50 second-grade children were assigned to one of two instructional groups. The control group received instruction in identifying main ideas and making inferences using a basal series; the experimental group was instructed using the Exemplary Center for Reading Instruction's highly structured sequences applied to the same basal reading passages. All children were pre- and posttested with the *Stanford Diagnostic Reading Test*. Results indicated that both groups made significant pre-post improvement in word reading and comprehension but no significant difference was found between the two instructional approaches.

SANGER, DIXIE D.; STICK, SHELDON L.; & LANGE, UNA A. An integrative reading-language approach. *Reading Horizons*, January 1986, *26*, 128-132.

Seeks to determine whether third-grade children identified as poor readers would be able to improve their reading after involvement in instruction employing an integrated reading-language approach. The 47 third grade children were identified by their classroom teachers according to informal observations, criterion-referenced tests, and the *California Achievement Test*. Twenty-seven individuals made up three experimental groups, and there were 20 in three control groups; all were from self-contained classrooms. One experimental and one control group were located in each of three schools. The study was of 14 weeks treatment time with an additional two weeks for pre- and posttests. The integrative exposure consisted of four language activities: (1) following verbal directions, (2) retelling stories, (3) describing objects or pictures, and (4) defining words. The depending measures included the *Informal Reading-Language Test*, and the *Test of Reading Comprehension*. The experimental teachers were instructed to select and integrate activities with reading instruction in situations were children appeared to have difficulty following directions, understanding and expressing ideas or vocabulary, or when unable to retell stories. Two of the experimental groups outperformed their control counter parts; performance in the third experimental group did not reach that of controls.

DEAN, RONDA; VACCA, JOANNE L.; & VACCA, RICHARD T. The influences of an anticipation guide on readers' response to a basal short story. *Reading Horizons*, April 1986, *26*, 197-201.

Designs an exploratory study to find out how an anticipation guide affects pupils' responses to text. A total of 47 third graders were assigned randomly to one of four classroom discussion situations: (1) a group of five who participated in an anticipation guide prior discussion prior to reading, (2) a group of five who participated in a regular prereading basal lesson, and (3) and (4) groups of 19 and 18 participating in the same procedures as (1) and (2) above, respectively. After discussion and reading a story, children were asked for written recalls, which were then analyzed. In the small groups, overall numbers of responses were similar, but quality differed. Children in the anticipation guide group produced more personal responses and also several evaluative responses. In the larger group, the anticipation guide resulted in more recall, interpretive, and evaluative responses.

GRIFFITHS, ALEX, & KING, ALASTAIR. Pact: Development of home-reading schemes in the ILEA. In Keith Topping, & Sheila Wolfendale (Eds.) *Parental Involvement in Children's Reading*. New York: Nichols Publishing Co., 1985, 82-91.

Gives preliminary findings of an interview conducted with 117 teachers involved in a home reading program through the Inner London Education Authority. About 80% of those questioned used a parent-child-teacher scheme and found it useful. Teachers estimated that 57% of children in their classes read regularly to their parents at home. Contact with parents varied considerably, and eight teachers had made home visits during the year. Teachers mentioned that benefits of the program included improved reading levels, improved attitudes to school, increased pleasure in books, and better home-school relationships.

WAREING, LORRAINE. A comparative study of three methods of parental involvement in reading. In Keith Topping, & Sheila Wolfendale (Eds.) *Parental Involvement in Children's Reading*. New York: Nichols Publishing Co., 1985, 241-245.

Does a comparative study of three techniques used by parents in a home reading project. Involved were three elementary schools from which small experimental and matched control groups were selected. All children were pre- and posttested for reading accuracy and comprehension on the *Neale Analysis of Reading Ability*. Parents of experimental subjects worked with children at home for eight weeks using one of three approaches: (1) Paired-reading, (2) Read-aloud (English and non-English), and (3) Linguistic. The Read-aloud group included some non-English reading parents who were asked to listen to their children read. Statistical analyses of results did not show any significant gains by children in the experimental groups. Neither did any one intervention approach prove significantly better than the other two.

WINTER, SAM. Giving parents a choice: Teaching Paired Reading and Pause, Prompt and Praise strategies in a workshop setting. In Keith Topping, & Sheila Wolfendale (Eds.) *Parental Involvement in Children's Reading*. New York: Nichols Publishing Co., 1985, 201-207.

Checks changes in children's oral reading fluency as a result of paired reading (PR) and pause, prompt, and praise strategies (PPP) used by parents. Parents of 12 British junior children were instructed in the use of PR and asked to use it for a week. At a second group meeting, parents were taught how to use PPP and asked to institute it for a week. Parents then were asked which procedure they preferred. Six selected PR, six PPP. Adolescent volunteers then worked with the children using the technique selected as preferred by the parent of each child. A questionnaire filled out by the teachers of nine of the children indicated a mean growth in children's confidence when reading. Analysis of the oral reading revealed an increase in words read per second from 1.24 to 1.45, a drop in error rate from 7% to about 5.5%. The mean number of self-corrections from pre- to postworkshop remained the same.

V-5 Teaching reading – grades 4 to 8

JUDY, JUDITH E.; ALEXANDER, PATRICIA A.; KULIKOWICH, JONNA M.; & WILSON, VICTOR L. Effects of two instructional approaches and peer tutoring on gifted and nongifted sixth-grade students' analogy performance. *Reading Research Quarterly*, Spring 1988, *23*, 236-256.

Notes the effects of direct instruction or inquiry, combined with peer tutoring, on performance in a verbal analogy task and in reading comprehension. Participants were 194 sixth grade pupils in nine classrooms. Classes were randomly assigned to a direct instruction, to an inquiry, or to a control condition. Three classrooms were homogeneously grouped while six contained pupils involved in gifted/talented programs as well as pupils in neither gifted nor remedial programs. Peer tutoring was done by 13 pupils from the direct instruction classes and 11 pupils from the inquiry classes. Tutor/tutee pairs were matched on gender and ability. Children were pre- and posttested using the final 35 items of the word comprehension subtest of the *Woodcock Reading Mastery Tests*, alternate forms, as well as on an author-devised embedded-analogy task consisting of 20 multiple-choice items. Three 50-minute training sessions were given on consecutive days following the pretest. Each peer tutor gave two 50-minute instructional sessions the following week to a control pupil; tutoring sessions were audiotaped. Direct instruction subjects performed significantly better on the analogy measures than inquiry subjects who outperformed controls. Gifted children did significantly better than nongifted children. Pupils' analogy performance improved from immediate to delayed posttest. Both experimental groups outperformed controls on the comprehension task. Tutored pupils performed comparably to pupils trained by the researchers. Direct instruction tutors were more accurate and effective than inquiry trained tutors.

QUELLMALZ, EDYS S., & HOSKYN, JANITA. Making a difference in Arkansas: The Multicultural Reading and Thinking project. *Educational Leadership*, April 1988, *45*(7), 52-55.

Discusses early results of a three-year project with 650 fourth, fifth, and sixth grade pupils in Arkansas who are engaged in Multicultural Reading and Thinking (McRAT). The project is designed to develop critical thinking abilities and to increase cultural awareness. Although no data are presented, it is reported that standardized testing at the end of the second year showed increases in percentile rankings in achievement scores in reading comprehension, social studies, and science. McRAT parents reported that children are reading more at home and applying strategies in home decision making.

NOLTE, RUTH YOPP, & SINGER, HARRY. Active comprehension: Teaching a process of reading comprehension and its effects on reading achievement. *The Reading Teacher*, October 1985, *39*, 24-31.

Studies the effects of teaching active comprehension processes on reading comprehension. Subjects were 40 pupils in two fourth and fifth grade classrooms: 19 randomly assigned to the active comprehension group and 21 to the control group. Active comprehension activities followed a four-step procedure, designed to phase out teacher questioning and to develop children's ability to ask each other and themselves reading comprehension questions. In the first stage, teachers reviewed story grammar, discussed the importance of asking questions, modeled the process of asking appropriate questions, and provided practice in question asking. In the second stage, the teacher began to phase herself out of question asking and phase the pupils into question asking by asking questions that required the children to respond with a question. In phase three, pupils worked in groups of five or six, and one child was chosen to elicit questions from the others. In phase four, children worked in pairs, asking each other questions. The reading instruction in the control group included brief previews of the story, introduction of new vocabulary and the teacher's assessing comprehension with a series of oral questions. On each of the first eight days of the study, children read material ranging in difficulty from grade four to six. On days 9 and 10, subjects read seventh grade material. A transfer task was given at the end of the experiment, in which pupils read a seventh grade text. Comprehension of instructional materials was assessed by 15-item multiple choice tests, and comprehension of the transfer text was assessed with a 20-item test. Using t-tests to contrast the two groups on the 10 daily comprehension tests and the transfer test, it was found that the experimental groups scored significantly higher on the first, fifth, seventh, ninth, and tenth tests and on the transfer test. Discusses the results in relation to direct instruction and metacognition. Concludes that self-questioning should not be viewed as simply a pre- or postreading activity, but rather as a process that enables pupils to become independent readers.

HEAD, MARTHA H., & BUSS, RAY R. Factors affecting summary writing and their impact on reading comprehension assessment. In John E. Readence, & R. Scott Baldwin (Eds.) *Research in Literacy: Merging Perspectives*. Thirty-sixth Yearbook of The National Reading Conference, 1987, 25-33.

Examines factors affecting the quality of summaries produced by seventh graders and the value of such summaries as a measure of text comprehension. Subjects were 53 grade seven pupils in three social studies classes. All were classified as average readers. Children were first asked to complete an interest inventory to determine level of interest in reading about the topic, then answered questions on a prior knowledge test and wrote a short essay. The latter was used as a measure of general writing ability. One week later, children read a 1,845 word target passage, and wrote a free-recall and a summary of it. Regression analyses were used to ascertain the predictive effects of the independent variables (topic interest, prior knowledge, and writing ability) on the summary criterion variables. Only number of important idea units could be reliably predicted by the predictor variables; writing ability was a statistically significant predictor. A multivariate repeated measures analysis of variance was used to examine differences between means for free recalls and summaries. Correlation coefficients were then calculated between summary scores and the multiple choice postreading questions. Free recalls contained more idea units than did the summaries. However, only a small amount of information was recalled. The number of idea units correlated .44 with multiple choice questions score.

ARMBRUSTER, BONNIE B.; ANDERSON, THOMAS H.; & OSTERTAG, JOYCE. Does text structure/summarization instruction facilitate learning from expository text? *Reading Research Quarterly*, Summer 1987, 22, 331-346.

Evaluates the effectiveness of instruction in text structure and summarization on comprehension of expository text. A total of 82 fifth graders were assigned to one of two treatment groups: (1) an experimental group which received instruction on reading and recognizing the problem/solution sructure and organizing written summaries of what they had read; and (2) a traditional instructional group which read, discussed, and answered questions over the same practice material used by the experimental group. Instruction took place over 11 consecutive school days. Four dependent measures were used: (1) a main idea essay test over a new problem/solution passage read independently; (2) a 10-item short answer test of specifics over the same passage; (3) two written summaries produced for two other problem/solution social studies passages; and (4) an essay test asking students to recall and discuss a passage used during training. Significant differences in favor of the text structure instructional group were found on the essay test and written summaries test. No differences were found on the short answer test and only marginal differences were found on the essay test of a previously discussed training passage.

TAYLOR, BARBARA M. Teaching middle grade students to summarize content textbook material. In James F. Baumann (Ed.) *Teaching Main Idea Comprehension*. Newark, DE: International Reading Association, 1986, 195-209.

Demonstrates middle grade pupils' difficulty in summarizing by reporting studies conducted with sixth graders reading on or above grade level, who were asked to read, study, and then summarize four pages from a social studies text. Examples from the pupils' papers are included to show how little they wrote, and how they had difficulty determining important information. Three strategies are included for teaching children to summarize textbook material: hierarchical summarizing, cooperative summarizing, and mapping. Instructions for how to implement each technique and research support for each technique are included.

MCKEOWN, MARGARET G., & BECK, ISABEL L. Learning vocabulary: Different ways for different goals. *Remedial and Special Education*, January-February 1988, 9(1), 42-46.

Presents a program for vocabulary instruction of intermediate grade children growing out of reviews of research literature and field testing. Instruction entailed a rich variety of activities, frequent encounters with each word taught, and encouragement to extend the use of words outside the classroom through a search activity called Word Wizard. In class, words were presented in semantic clusters of 8 to 10 words, with each set featured over a week's time, and with processing times and demands increased each day. Most activities were taught to the whole class, placing emphasis on discussion and interaction around the words. Teacher modeling was integral to instruction. Two studies demonstrated that pupils significantly improved accuracy of word knowledge and did better on semantic decision tasks and story comprehension after having been taught with these techniques. A third study investigated aspects of the first two, but also focused on the value of the extension activities. Scores on speed of reading and comprehension of stories were higher for pupils who had participated in Word Wizard extension activities.

FULTON, ANNIE N.W., & WILLIAMS, HAMPTON S. The effectiveness of selected teaching strategies integrating the teaching of science concepts with the improvement of reading-language skills. *Educational and Psychological Research*, Summer 1985, *5*, 215-227.

Determines whether three teaching strategies integrating science concepts and reading-language skills have different effects on the science and reading achievement of seventh graders after a nine-week period of daily instruction for one-hour. Subjects were 186 children, divided into four groups, each with a different instructor. Group 1($n=65$) used read-along tapes and activity sheets; Group 2($n=31$) concentrated on simplifying syntax, and defining vocabulary words etymologically, while eliminating complex sentences; Group 3($n=30$) listened as the teacher read each concept and activity, introducing new words and using them in sentences before pupils read the passages back to the teacher; and Group 4, the control group ($n=60$), received no new strategies, but were taught the same science concepts of analysis and problem solving. Science achievement was assessed with the *Test of Seventh-Grade Life Science Concepts* (LSC) and reading with the *Gates-MacGinitie Reading Tests*, vocabulary and comprehension. There were significant differences among groups on science achievement and reading comprehension. In science, the control group scored higher than groups 1 and 3, and group 2 scored higher than group 3. In comprehension, group 2 scored higher than groups 1 and 3.

DUIN, ANN HILL, & GRAVES, MICHAEL F. Intensive vocabulary instruction as a prewriting technique. *Reading Resarch Quarterly*, Summer 1987, *22*, 311-330.

Compares three approaches used to teach vocabulary to 80 seventh graders prior to asking them to write an expository essay. Subjects were divided into three equal size ability groups on the basis of test scores. Subjects were taught 13 target words over a six-day period with dependent measures including vocabulary knowledge from pre- and posttests, the number of target words used in pre- and posttreatment essays, the quality of writing in pre- and posttreatment essays as assessed by two writing scales, and attitudes, as reported on attitude inventories and parent comments. Subjects in the intensive vocabulary and writing group discussed words, listened to passages containing the words, wrote words and sentences, searched for words in outside of class sources, played games and made associations with words, discussed synonyms, wrote and evaluated group essays using the words, and heard outside speakers discussing the topic. Subjects in the intensive vocabulary group did the same activities, with the exception of the writing activities. Subjects in the traditional vocabulary group did worksheets on the words and looked the words up in the dictionaries, sharing their definitions and sentences. Children in the vocabulary and writing group consistently outperformed those in the other two groups. Pupils in the vocabulary alone group outperformed children in the traditional vocabulary group. Attitudes toward learning new words were high, especially for the vocabulary and writing instruction group.

V-6 Teaching reading – high school

Armstrong, Diane P.; Patberg, Judythe; & Dewitz, Peter. Reading guides – helping students understand. *Journal of Reading*, March 1988, *31*, 532-541.

Studies the effectiveness of two types of reading guides, hierarchical and nonhierarchical, in improving high school students' comprehension of a novel. Also assessed were students' enjoyment of the guides, and their transfer of skills from the guides to other materials. Three classes, total 69 students, were randomly assigned to hierarchical, nonhierarchical, or control conditions. Study duration was seven weeks, with treatment guides used every other day. Pretests and posttests were administered, with scores on the posttest serving as the measure of transfer. A test was given each treatment day to determine how well the assignment had been comprehended. In the experimental groups, the investigator discussed the different levels of activities and demonstrated how guides contained information at three levels of comprehension. Students were encouraged to apply their understanding of the levels to their reading. Data were analyzed using analyses of covariance. Significant differences were found for the use of reading guides, but no differences were found between the two types of guides. Students of all ability levels benefited from guides, but above average readers showed more gain. Students who had guides scored higher on posttests, suggesting transfer of guide skills. Students' reported that the guides were helpful and enjoyable.

Palmer, Barbara C. The longitudinal effects of three methods of teaching on the ability of twelfth grade students to interpret figurative language. *Reading Improvement*, Fall 1987, *24*, 186-192.

Reports a follow-up study of 42 twelfth graders originally taught as ninth graders with three specific methods of teaching reading comprehension: (1) a vocabulary method, (2) a MRM method identifying sentence kernels, and (3) a LOGANAR method involving logically analyzing cognitive relationships. The purpose was to determine the effects of these methods on their current comprehension and vocabulary achievement. Subjects had been given the *Ohio State University Psychological Exam*, vocabulary subtest; the *Nelson-Denny Reading Test*, vocabulary subtest; and the *Davis Reading Test* at the ninth grade level; an inference comprehension score was also derived from the Davis items. These same tests were administered at twelfth grade, along with the *Smith/Palmer Figurative Language Interpretation Test*. No significant differences were found between the scores of the groups taught by the three different methods on the figurative language test. Pearson Product Moment correlation coefficients indicated significant relationships between figurative language scores and grade point average, vocabulary test scores, and reading comprehension test scores, but no relationships for gender.

Schon, Isabel; Hopkins, Kenneth D.; Everett, Jamie; & Hopkins, B.R. The effects of a special motivational library program on high school students' library use and attitudes. *Journal of Experimental Education*, Fall 1985, *54*, 40-43.

Investigates the effects of a special school library initiated and library based motivational program on high school students' library use, library/librarian attitudes, and reading attitudes. The randomized experiment was performed in five high schools in which a random half of enrollees in a sophomore English class received a special 8-week library oriented treatment designed to improve their understanding of, attitudes toward, and use of the school library. Six female and one male librarians from five high schools volunteered to participate. The school librarians followed a program of specific library related activities designed to improve students' attitudes and their use of the library. The programs were of 11 weeks duration, with eight weeks devoted to one 50-minute weekly treatment on each of eight specified topics. Library use was monitored during the final two weeks of treatment and the three weeks following treatment. Student attitudes were gleaned from their responses to the *Library Attitude Scale* and the *Reading Attitude Scale*. The average experimental student used the library about three times during the five-week data gathering period, while the mean for controls was only about one time. There were great differences among librarians in library use, ranging over the five-week period assessment from a mean use per student of only .23 times in one school to 5.9 in another, with a median of .86. The proportion of nonusers during the five-week data-gathering period ranged from 54% to 91%. There were no measurable effects on students' reading attitudes.

Bergerud, Donna; Lovitt, Thomas C.; & Horton, Steven. The effectiveness of textbook adaptations in life science for high school students with learning disabilities. *Journal of Learning Disabilities*, February 1988, *21*, 70-76.

Compares three methods of studying science textbook passages (graphics, study guides, and self-study) in four high school classes (n=14, 12, 12, 11) where the majority of students were identified as having learning disabilities. Three classes read the same three passages and received all three treatments in a counterbalanced order over a three day period. A fourth class served as a control group. Prior to the experiments, groups were equated on prior knowledge through a 50-item vocabulary test. Graphics consisted of diagrams with parts of pictures or labels missing for subjects to complete. Study guides contained 20 items on main concepts and vocabulary. For each passage, subjects completed a 20-item test, with 10 items appearing as written text and 10 as diagrams or drawings plus words. Students had 10 minutes to read the passage, 15 minutes to complete the graphic or study guide exercise, and 25 to complete the self-study portion. No significant differences were found for classes, but there was a significant effect for treatment. Test scores were higher for graphics than for study guides or for self study. There was also a significant interaction between class and treatment. For test questions, graphic treatment was superior to other treatments on graphic questions, and study guides were better on text questions.

Knott, Gladys. Literacy instruction in secondary school classroom contexts. In David Bloome (Ed.) *Literacy and Schooling*. Norwood, NJ: Ablex Publishing Corporation, 1987, 354-371.

Discusses literacy development in secondary schools. First, recent theory and research from the areas of linguistics, psycholinguistics, and cognitive psychology were presented as they apply to literacy acquisition . Second, the inadequacies of current classroom practice were characterized by attempts to encourage every secondary teacher to be a teacher of reading, by the use of ineffective models of reading instruction, and by questionable assumptions to improve reading. Third, traditional instructional contexts thought to generate inferior achievement were contrasted with redefined interactive contexts that encourage communication, reflection, and the sharing of knowledge.

V-7 Teaching reading–college and adult

Heinrichs, Audrey S., & Lehnert, Linda. Using direct instruction in a college study skills course. *Reading Horizons*, Fall 1986, *27*, 32-37.

Describes a college study skills offered to the lowest third of a freshman class and relates information on its evaluation. Effectiveness of the course for the 214 students was determined by end of semester grade point average (GPA) and questionnaires. GPAs for study skills enrollees were compared with those of nonenrolled students. GPAs of 2.0 or better were received by 68% of enrollees at the end of the first semester, while of 453 freshmen not enrolled, 67% received a 2.0 or better. Questionnaire results indicated students benefited from the class.

Cate, Laureen Connelly, & Heerman, Charles E. Infusing writing activities into college reading. *Reading Horizons*, Summer 1987, *27*, 261-268.

Sought to measure the effects of infusing writing components into a 16-week college reading course, where the writing components replaced 30% of the time originally devoted to reading. Subjects were 61 students currently receiving the writing infused model and two groups of 124 and 69 students from prior semesters when instruction lacked the writing infusion. All took the *Nelson-Denny Reading Test* as a pre- and posttest. Writing infusion consisted of three treatments: written pre-reading organizers where subjects wrote a main idea sentence and an organizing paragraph prior to reading and answering questions; sentence combining over 20 paragraphs taken from a leveled, commercial reading kit; and written book reports. A repeated measures analysis of variance indicated significant differences in vocabulary, comprehension, and total reading test scores for the group receiving writing infusion. An analysis of covariance suggested a significant instructor effect for vocabulary, but not for other areas. Results from the ANOVA comparing reading achievement across the groups suggested group differences were present, with the writing group differing from one of the reading groups. Subjects were asked to rate the usefulness of the three writing activities and five reading activities. Seven of the activities were considered more useful than writing book reports, and six were considered more interesting. Sentence combining and written organizers were viewed as useful but were rated low for interest.

Smith, Brenda D., & Elifson, Joan M. Do pictures make a difference in college textbooks? *Reading Horizons*, July 1986, *26*, 270-277.

Examines the effect of pictures on reading comprehension of college textbook material. Subjects were 140 students in eight developmental reading classes. Classes were randomly assigned to a history passage with three accompanying pictures or to the same passage without pictures. Following the reading of the 1108-word passage, students were asked to answer a 15-item multiple choice test assessing both literal and implied meanings. No significant difference was found between the two groups on the multiple choice test. In a second study, 145 students were asked to choose either the illustrated or unillustrated passage to read. Only 26 chose the unillustrated version.

Rauch, Margaret, & Fillenworth, Ceil. Paired courses: An instructional model designed to enhance academic success. *Forum for Reading*, Fall/Winter 1987, *19*, 19-24.

Describes a paired course instructional model used with high risk college students and presents results of its effectiveness. In the program, freshmen were required to select a core course in reading/study skills or reading rate paired with a general education course. Instructors met to share how the reading course could be coordinated with its paired course. Reading course instructors sat in on general education courses, reviewed textbooks, aided with notetaking, and generally coordinated their class with the paired course. Results of grade point average data indicated that the paired course instructional model had a positive effect on academic achievement of high risk freshmen.

Grogan, Denise. From margin to centre: A study of the comparative effectiveness of two types of literacy programme in alleviating the marginality of the adult illiterate person. *Proceedings of the Ninth Annual Conference of the Reading Association of Ireland*, 1984, 152-171.

Gives the philosophy behind a group literacy program, the methodology and content used, and a brief evaluation. The program was modeled on the work of a Brazilian educator, Paulo Freire. The program, used with two classes of 16 students each, was compared with a group of 16 students in a Functional class on the *Dublin Literacy Scheme Test*, the *How's It Going test*, the *Reading How To* test, and the *Warwickshire Literacy Placement Guide*. Difference between achievement gains of the two programs were not statistically significant. Group-Based students did demonstrate decreased self-effacement, decreased masochism, decreased docility, and reduced dependence on the *Self-Esteem Scale*. Functional students showed more independence, less docility, reduced masochism but a large shame factor on the same measure. All Group-Based students evaluated the program as very valuable or quite valuable in aiding them to cope with the literacy demands of the job, whereas only six of the Functional students responded in a like manner. Another measure found increased community level involvement for adults in the Group-Based program but no change for those in the Functional program.

V-8 Instructional materials

MARZANO, ROBERT J., & MARZANO, JANA S. *A Cluster Approach to Elementary Vocabulary Instruction*. Newark, DE: International Reading Association, 1988.

Organizes 7,230 words taken from *Basic Elementary Reading Vocabulary, The American Heritage Word Frequency Book*, and *Word Frequency of Spoken English*, into semantically related groups, producing three levels of instructional clusters: superclusters, clusters, and miniclusters. After categorizing, clusters were reviewed by 60 elementary teachers, who identified words not fitting the classification. Words were reclassified until teachers identified as miscategorized fewer than 5 words in 1,000. Results were 61 superclusters, 430 clusters, and 1,500 miniclusters. All superclusters, clusters, and miniclusters are included in appendices, listed first by size of cluster, and then alphabetically, cross-referenced to the size of cluster list. In each cluster, words are given a grade level, part of speech, and basic word designation. Grade level designations were determined by the Harris and Jacobson and the Thorndike and Lorge lists. Teachers recommended the designations for parts of speech, and basic words were identified by comparing the clusters with the lists generated in earlier research.

GATES, LOUIS. The consonant generalizations revisited. *Reading Horizons*, July 1986, *26*, 232-236.

Analyzes, by use of a computer, the consonants in 17,211 words from the *Stanford Spelling Word List*. Consonants were first clustered into three general categories: (1) those appearing in specific letter combinations or phonograms such as *twin*, (2) consonant di/trigraphs, and (3) single consonants. Examined then was the first letter-sound relationship under each category for each word in the list. There were only 681 unpredictable letter-sound relationships of 60,781 individual ones examined. The number of phonic generalizations was reduced to three.

WEBSTER, RAYMOND E.; MCINNIS, ELIZABETH D.; & CRAVER, LISA. Curriculum biasing effects in standardized and criterion-referenced reading achievement tests. *Psychology in the Schools*, April 1986, *23*, 205-213.

Examines the extent to which words used in items on four standardized reading achievement tests and three criterion-referenced tests overlap with the words taught in five commercial reading programs at the third grade level. Hypothetical grade equivalent scores were derived by summing the total number of words matched in each reading test and program and converting the total to a grade score. The findings revealed two major patterns.

First, a wide variation in degree of overlap between tests and programs was found. Two tests, in particular, deviated substantially from the grade levels in the reading programs. Second, scores on each test were relatively consistent across reading programs. Implications for identification and placement in special programs are discussed.

Shapiro, Edward S., & Derr, Tami F. An examination of overlap between reading curricula and standardized achievement tests. *Journal of Special Education*, Summer 1987, *21*, 59-67.

Examines the overlap between reading subtests of four individual achievement tests and five basal reading series. The reading subtests considered were the Reading Recognition subtest of the *Peabody Individual Achievement Test*, the Reading subtest of the *Wide Range Achievement Test-Revised*, the Reading Decoding subtest of the *Kaufman Test of Educational Achievement*, and the Word Identification subtest of the *Woodcock Reading Mastery Tests*. The basal reading series selected were Ginn's Reading 720, Scott, Foresman Reading, MacMillan-R Series, Keys to Reading, and Scott, Foresman Focus Series. Overlap was assessed by comparing the reading series word lists with the test word lists for grades one through five. Results are reported in terms of the score a hypothetical pupil would receive on each test if he or she had mastered all of the words within a given grade level of the reading series. Substantial discrepancies were found between and within series across grade levels. Little overlap was found between the content of the standardized tests and the basal reading textbooks, and overlap decreased as grade level increased.

Gottsdanker-Willekens, Anne E. Anaphoric reference instruction: Current instructional practices. In Judith W. Irwin (Ed.) *Understanding and Teaching: Cohesion Comprehension*. Newark, DE: International Reading Association, 1986, 83-93.

Examines basal readers and language arts texts to ascertain the extent of coverage of anaphoric relations in general and pronouns in particular. Materials from eight publishers were covered, but not all levels of each series were available. Six types of pronouns were found: personal, demonstrative, possessive, reflexive intensive, relative, and unusual. All series covered personal pronouns, but only one series each covered demonstrative, reflexive intensive, and unusual. A variety of activities were used, but only a few accounted for most of the activities.

Dreher, Mariam Jean; Singer, Harry; & Letteer, Catherine A. Explicitness in sixth-grade social studies textbooks. In John E. Readence, & R. Scott Baldwin (Eds.) *Research in Literacy: Merging Perspectives*. Thirty-sixth Yearbook of The National Reading Conference, 1987, 177-185.

Samples 12 sixth grade social studies texts to determine the degree of explicitness. Six of the texts had publication dates of 1980 or later; six were published between 1970 and 1973. Five of the older texts were selected from the same publishers as the more recent texts. A six-item inventory was used to rate texts on a five-point scale. Three random samples were selected from each book and rated independently by two raters. Total scores could range from 6 to 30, with the lower score indicating a more explicit text. Mean total score for newer texts was 14.61; for older texts, 13.72. Nine of the texts fell into the explicit category. There were no statistically significant differences between the recent and older textbooks on total explication scores.

Olson, Arthur V. A question of reading validity. *Journal of Research and Development in Education*, Summer 1986, *19*, 33-40.

Examines the readability of the *McCall-Crabbs Standard Test Lessons in Reading*. Because the McCall-Crabbs lessons have been widely used as a criterion measure in the development of readability formulas, this study was conducted to determine the reading difficulty within books and across books in the series. Six readability formulas were applied to the McCall-Crabbs passages. Considerable variation in difficulty was found among formulas within individual books and across books in the series. Reading difficulty did not increase uniformly within books nor across books. The validity of readability formulas that used the McCall-Crabbs lessons as a criterion was questioned.

Olson, Mary W., & Gillis, M.K. Text type and text structure: An analysis of three secondary informal reading inventories. *Reading Horizons*, October 1987, *28*, 70-80.

Evaluates the secondary passages found on three commercial informal reading inventories. Eleven teachers were trained to analyze the structure of narrative and expository passages found on the *Advanced Reading Inventory*, *Content Inventories*, and the *Informal Reading Assessment*. Interrater reliability was high (.94 and .93) for two of the inventories but low (.42) for the third. Overall, 18% of the passages were found to be narratives and 82% to be expositions. On the *Informal Reading Assessment*, raters were unable to agree on text type for any passage and were unable to identify any kind of rhetorical structure for 37% of the passages. Implications for assessment and placement were discussed.

Duffelmeyer, Frederick A., & Duffelmeyer, Barbara Blakely. Main idea questions on informal reading inventories. *The Reading Teacher*, November 1987, *41*, 162-166.

Analyzes main idea questions on three IRIs (the *Analytical Reading Inventory*(ARI), the *Basic Reading Inventory*(BRI), and the *Informal Reading Inventory*(IRI). The analysis was performed of designated main idea questions across all forms of the three IRIs. Each question was evaluated to determine which of three comprehension skills it actually measured: main idea, topic, and other. The percentage of bona fide main idea questions ranged from a low of 7% on the BRI and the IRI to a high of 13% on the ARI. The majority of questions on the three IRIs assessed the ability either to state a selection's topic or recall some other aspect of content. Compared percentages of main idea, topic, and other questions for the three IRIs in grade-level categories: preprimer-2, 3-6, 7-12. None of the questions associated with reading selections in the pre-PP-2, or beginning reading range were actually main idea questions; over two-thirds were topic questions. Topic questions occurred with nearly the same frequency in the Grade 3-6 (62%), and 4-12 (59%) ranges.

Moor, Rosamund. Designing worksheets for middle school pupils. *Support for Learning*, August 1987, *2*(3), 15-20.

Suggests that many of the commercial worksheets used with middle school (ages 9-13) English pupils are not at appropriate reading levels for children with special needs. Worksheets were evaluated with the Mugford readability formula and were carefully scrutinized for typeface, text layout, illustrations, syntax, concepts and vocabulary, number of facts included, and types of questions asked. Cloze passages were constructed over sample worksheets and administered to first year and second year pupils who had already studied the material the sample worksheets covered. After many pupils had difficulty with the cloze passages, the pupils were interviewed to determine how the worksheets could be improved. Using some of their 15 ideas, three different redesigned worksheet layouts were produced. Six children, interviewed in pairs as to which worksheet they liked, chose worksheets with big print or writing and color, and the inclusion of pictures and a glossary. From the investigations and the interviews, a set of criteria for teachers to consider when designing worksheets for special needs children was developed, and these criteria are included in the article.

Moore, David W., & Smith, Bonnie-Louise. Main idea treatment in secondary reading skill development materials. In John E. Readence, & R. Scott Baldwin

(Eds.) *Research in Literacy: Merging Perspectives*. Thirty-sixth yearbook of The National Reading Conference, 1987, 161-167.

Describes main idea treatment in secondary reading level skill development materials, using three series for analysis. The materials were selected because they were designed to develop secondary students' reading proficiencies and because they presented specific main idea activities. Examined were materials for 7th, 9th, and 12th grades. Employed was a coding system consisting of four main categories: (1) guidelines for identifying a main idea; (2) main idea tasks; (3) main idea passages, and (4) values of identifying a main idea. Each series treated main idea instruction differently. Answer-recognition tasks predominated. There was a substantial emphasis on determing details that support the main idea. It appeared that no systematic program of instruction in main idea was to be found within or across grade levels.

Farris, Pamela J.; Kissinger, Rodney W.; & Thompson, Thomas. Text organization and structure in science textbooks. *Reading Horizons*, Winter 1988, *28*, 123-130.

Examines text organization and structure in five science series textbooks for grades 4 and 6. Text structure was analyzed for the following patterns: (1) problem/solution, (2) description, (3) comparison, (4) antecedent/consequent, and (5) sequencing. Activities were analyzed in terms of Bloom's taxonomy of cognitive thinking skills: (1) knowledge, (2) comprehension, (3) application, (4) analysis, (5) synthesis, and (6) evaluation. Additionally, texts were scrutinized for the presence of prereading questions, advance organization, and margin notes. Advance organizers were used by all five series, prereading questions by two, and margin notes to highlight important concepts by three. At grade four level, three of the series relied heavily on descriptive and sequencing text patterns; one series was mostly descriptive, sequencing, and antecedent/consequent; one text, while mainly descriptive, included comparison. At grade six, four of the five series used predominantly descriptive and sequencing text. In all five series, the activities emphasized knowledge and comprehension cognitive levels. Only two series included activities requiring higher level thinking at both grade levels.

Stahl, Norman A.; Simpson, Michele L.; & Brozo, William G. The materials of college reading instruction: A critical and historical perspective from 50 years of content analysis research. *Reading Research and Instruction*, Spring 1988, *27*(3), 16-34.

Examines the published content analyses of college reading texts from the standpoints of (a) methodology employed, (b) specific information presented, and (c) observed trends in content that have been presented since the mid-1920s. The review begins with content analysis research published prior to 1975. Studies in this period were categorized and reviewed under two basic groups: (1) those anlyzing the overall content of a text, and (2) those focusing on specific skills or subskills presented in a text. A second major section views contemporary content analysis studies under two major headings: (1) theory/research-driven analysis, and (2) curricular-driven analysis. Included are summary tables of the findings of the various studies. Five generalizations were gleaned from the conclusions of the various studies: (1) a consensus as to what constitutes effective study methods did not exist, (2) research support for most of the techniques advocated was missing, (3) adequate instruction and practice for the skills presented were limited, (4) transfer value of many practice activities to actual reading was questionable, and (5) reliance on impression as opposed to research was the norm.

Shymansky, James A., & Kyle, Jr., William C. Instructional materials: How do lesson materials affect student performance? *Science Education*, June 1988, *72*, 358-360.

Lists and reviews briefly about 12 studies dealing with various aspects of reading and studying in science textbooks.

Heinrichs, Audrey S., & LaBranche, Susan P. Content analysis of 47 college learning skills textbooks. *Reading Research and Instruction*, Summer 1986, *25*, 277-287.

Describes the development of criteria for selecting learning/study skills textbooks for college freshmen and analyzes the content of 47 textbooks with an accompanying checklist. Five areas of concentration were identified in the textbooks, all except one of which were published since 1981. The five areas were: Reading, Learning Skills, Combined Reading and Study Skills, Specialty Texts dealing with one specific topic, and Resource or Supplementary texts. The two major categories included in the checklist were Content and Organization, each having a listing of specific skills under it. Vocabulary is included in almost all of the texts, with reading comprehension and critical reading often included also. Reading speed is taught about 60% as often as comprehension and critical reading. Few textbooks examined were all inclusive.

Beatie, Bruce A.; Martin, Laura; & Oberst, Bethany S. Pedagogy *ex silentio*: Treatment of reading skills in elementary college-level foreign language texts in the United States. In A.K. Pugh, & J.M. Ulign (Eds.) *Reading for Professional Purposes*. London: Heinemann Educational Books, 1984, 227-237.

Undertakes a survey of college-level foreign language textbooks to determine methodologies employed in teaching foreign language reading skills. Analyzed were 25 standard first year texts in German, French, and English, and 16 texts intended for teaching reading skills alone. Texts were viewed for treatment of reading in three phases: prereading, presentation of text, and postreading. In general, only minimal attention was paid to the prereading phase, while great attention has been paid to control of grammar and vocabulary. The majority of readings were unrelated to one another across a single book. One-fourth of the texts did no comprehension follow-up with their readings. Even the group of 16 texts whose purpose was the development of reading skills only frequently showed a reliance on grammar/translation approaches, a lack of strategies for reworking passages for additional learning, and limited and nonsystematic exercises for vocabulary building.

V-9 Teaching – grouping/school organization

Evansville-Vanderburgh School Corporation. *A Longitudinal Study of the Consequences of Full-Day Kindergarten: Kindergarten through Grade Eight.* Evansville, IN: Evansville-Vanderburgh School Corporation, 1988.

Summarizes the results of two previous studies conducted by the Evansville-Vanderburgh School Corporation on the effectiveness of full-day kindergartens and adds follow-up information for grades five through eight. The program began in four schools in the 1978-79 school year and was compared with results of a half-day kindergarten in four other schools. There were 187 full-day kindergarten children in 1979 and 223 in 1980; controls numbered 223 and 203, respectively, in the two years. Only children still enrolled in the same elementary school at the time of data collection were included in the present study. All children enrolled in any of the 10 middle schools in the system were included who were in the original control or experimental groups. Data collected included standardized test scores, report cards, attendance and school records, questionnaires, and interviews. By middle school, no differences in attendance records were found. For grades three and four, the *Survey of School Attitudes* suggested no overall difference in school attitudes between the two groups. A significantly greater proportion of half-day kindergarten children were retained at the end of the kindergarten year. Full-day kindergarten children showed consistently higher achievement test scores in all areas except handwriting in kindergarten and on reading tests in grades 1, 2, and 3 and on a battery of standardized tests in grades 3, 5, and 7. Numerous additional findings are reported.

Gamoran, Adam. Instructional and institutional effects of ability grouping. *Sociology of Education*, October 1986, *59*, 185-198.

Attempts to separate instructional and institutional effects of ability grouping in first grade. Observational data were collected in 12 classrooms, each seen 12 times at approximately three-week intervals over the course of a year. Two tests were administered in September as a measure of pre-first grade reading aptitude: the *Barr-Kibby Word Learning Tasks* and the reading subtest of the *Wide Range Achievement Test*. Word learning measures were administered in December, March, and May to check the number of words learned. In addition, school records and teacher interviews were used to obtain in;formation on family backgrounds such as socioeconomic status. Grouping was found to have a small independent effect that appeared early in the year but lacked permanency. The number of words and phonics concepts taught, differentiated by groups, had a sizeable impact on pupil learning. Thus, instructional effects were found to have the most influence on learning.

Slavin, Robert E. Ability grouping and its alternatives: Must we track? *American Educator*, Summer 1987, *11*(2), 32,34-36,47-48.

Reviews the research on ability grouping, focusing on reports of at least one semester's duration which used standardized tests of reading and/or mathematics. The research is first separated into the two major categories of between-class and within-class grouping arrangements. Between-class grouping is broken down into whole class tracking, regrouping for reading and/or mathematics, and the Joplin Plan. In addition, research into group-based mastery learning and cooperative learning are addressed briefly. It is concluded that combining cooperative learning with within-class ability grouping can be effective. The Joplin Plan is also claimed to show effective results.

Slavin, Robert E. Ability grouping and student achievement in elementary schools: A best-evidence synthesis. *Review of Educational Research*, Fall 1987, *57*, 293-336.

Reviews extensively research findings on the effects of between- and within-ability grouping on the achievement of elementary school children. The best-evidence synthesis technique, a combination of meta-analytic and narrative reviews, was used. The author claims the review supports the Joplin Plan for reading. It is further argued that ability grouping is most effective: (1) when done for only one or two children and with children remaining in heterogeneous classes most of the day; (2) when pupil heterogeneity in a specific skill is reduced; (3) when group assignments are reassessed frequently; and (4) when level and pace of instruction are varied according to pupils' needs.

Kerckhoff, Alan C. Effects of ability grouping in British secondary schools. *American Sociological Review*, December 1986, *51*, 842-858.

Reports the results of an investigation into the effects of school organization on the academic achievement of British secondary school students. Data were collected from the National Child Development Study, a study of most children born in England, Scotland, and Wales during one week in March, 1958. Follow-up studies were conducted when the cohort was 7, 11, 16, and 23 years old. The report abstracted here includes data primarily from ages 11 and 16. Achievement tests in reading and mathematics were administered at the ages indicated. Additionally, a general ability test was given at age 11. Age 16 tests were given just prior to the earliest point at which students could leave school; about two-thirds of the cohort left school at 16. Students attended four types of schools: comprehensive, grammar, and secondary modern schools in the state sector, and private schools. Schools were asked whether students were ability grouped in English or mathematics and which group given students were in. Students were identified as being in ungrouped classes; remedial classes; in high, medium, and low levels in a three-group system; and in high and low levels in a two-group arrangement. Regression analyses indicated school type had only limited effects on age

16 reading scores when control variables and test scores at ages 7 and 11 were taken into account. However, attending a grammar school or a private school, rather than a comprehensive school, added 1 1/2 to 2 1/2 points to the mean score on the age 16 mathematics test. The remedial reading group fell three-fifths to three-quarters of a standard deviation below their expected performance. Overall, increased gains for high ability groups and decreased gains for low ability groups were found most clearly in comprehensive and secondary modern schools. Generally weaker divergence results were found in the other school types. Students in remedial classes and in low ability groups tended to lose ground, while students in high ability groups tended to increase their performance beyond that of comparable students in ungrouped settings.

ESHEL, YOHANAN; WAINRYB, CECILIA; & SHACHAR, HANA. Open education and reading comprehension of high-ability elementary school pupils. *British Journal of Educational Psychology*, June 1987, *57*, 166-178.

Assesses the effects of open education on reading comprehension. Participants were 435 fourth to sixth grade Israeli children from five elementary schools, 232 in open schools and 203 in traditional schools. In both schools, about 60% of children were from a middle socioeconomic background and about 40% came from a lower socioeconomic environment. Children were designated as either high or low ability based on vocabulary subtest scores on the MILTA group intelligence test. Reading comprehension was determined by an adaptation of the standardized Israeli reading comprehension test for grades three to six. Four subscales of seven items each were included in the test: (1) easy literal comprehension, (2) difficult literal comprehension, (3) easy inference, and (4) difficult inference. Six observers used a 34-item 4-point scale observational instrument to determine instructional methods employed (open or traditional). No significant interaction was found between grouping method and cognitive ability. Children in the open classrooms achieved higher total mean comprehension scores than did children in traditional classes. Open classrooms also scored higher than traditional classrooms on each of the comprehension subscales.

V-10 Corrective/remedial instruction

RENNIE, BARBARA J.; BRAUN, CARL; & GORDON, CHRISTINE J. Long-term effects of clinical intervention: An in-depth study. *Reading Horizons*, Fall 1986, *27*, 12-18.

Follows up seven former clients of a university reading/language clinic. Subjects were randomly selected from the clinic files of children served between 1977-1983. At the time of follow-up, four children were 10 years old, two were 11, and one was 16. Structured interviews were conducted and the *Informal Reading Assessment* given. Six of the seven subjects were at or above instructional level for their grade placement. All did some independent reading and writing of fiction. When asked to identify their own strategies for various purposes and those of a hypothetical best reader, lack of understanding was the major reason given for rereading. Strategies for single word decoding included asking the teacher, using the dictionary, or asking a peer.

MARSTON, DOUGLAS. The effectiveness of special education: A time series analysis of reading performance in regular and special education settings. *Journal of Special Education*, Winter 1987-1988, *21*, 13-26.

Focuses on the progress of 11 learning disabled children while instructed first in regular classrooms and then in a school-based special education resource room. Data were collected and analyzed via a time series research design in which each subject served as his/her own control. Two phases were checked. Phase A was the control period in the regular classroom; Phase B began when the child was placed in the resource room. Subjects spent a minimum of 10 weeks in each phase. Curriculum-based measures used were grade level, survey level, and common passages of materials read orally once a week. Number of words read correctly were recorded. Average increase in words read correctly was .6 words per week in Phase A and 1.15 words per week in Phase B. The difference proved statistically significant.

WILSON, ROBERT M., & HOYER, JUDITH P. The use of signing as a reinforcement of sight vocabulary in the primary grades. In Linda B. Gambrell (Ed.) *New Directions in Reading: Research and Practice*. 1985 Yearbook of the State of Maryland International Reading Association, 43-51.

Asks whether including signing in teaching sight vocabulary will aid the ability to poor readers to retain words. Teacher volunteers in 10 schools participated in the final data collection. Teachers were asked to collect information on one pupil over a 14-week period. Subjects were children who had a history of difficulty in retaining vocabulary. The first four weeks of the study consisted of the regular basal instruction; the following six weeks children were taught using the sign intervention. Teachers then returned to basal instruction for two weeks and ended with two weeks of signing again. Retention was assessed for 10 words taught under each approach. For basal instruction, 69% of words were retained; for signing, 93% were retained.

LEVINE, DANIEL; HOLDSWORTH, STEVE; & AQUILA, FRANK D. Achievement gains in self-contained Chapter 1 classes in Kansas City. *Educational Leadership*, March 1987, *44*(6), 22-23.

Reports changes raising achievement in language, reading and mathematics in the Chapter 1 schools of Kansas City, Missouri, with special emphasis given to the achievement in Project Alternative Rooms (PARS), where children received instruction in self-contained, double-staffed classrooms, rather than through pull-out programs. Key components of the program included motivation, basic skills emphasis, team teaching, and small group instruction. First graders registered gains of 1.0, 1.5, and 1.2 years in reading, language, and math, respectively, within one academic year; second graders gained from 1 to 1.2 years in each area, and fourth graders from 1 to 1.3 years. A separate analysis for pupils who were retained suggested that high achievement scores were not an artifact of promotion policy.

COCHRANE, MERUS, & BALLARD, KEITH D. Teaching five special needs children in a regular primary classroom using a consultation-collaboration model. *Exceptional Child*, July 1986, *33*, 91-102.

Evaluates a consultation-collaboration intervention model used to assist an elementary classroom teacher in Australia in working with five special needs children, four boys and one girl. All children had failed to show progress in reading after two to four years of schooling. The researcher observed and recorded various pupil and teacher behaviors during reading group and in tutoring situations. Additionally, reading behaviors of children were observed during reading periods when they were not in the reading group with the teacher. Both teacher and parents were asked to fill out a questionnaire at the end of the 22 week intervention period. During intervention, each child was taught individually for five to six minutes per day. The collaboration effort was a function of the psychologist and teacher jointly planning programs for the children. Children showed a mean gain of 6.4 Reading Recovery levels after the 22 weeks of tutoring and an additional mean gain of 2.5 levels during the 12 weeks until follow-up. All children began to read independently during class reading times while the teacher was working with other groups. Both teacher and parents felt that significant gains had been made in reading.

KNAPMAN, DAVID. The Elmwood project, Somerset. In Keith Topping, & Sheila Wolfendale (Eds.) *Parental Involvement in Children's Reading*. New York: Nichols Publishing Co., 1985, 75-81.

Relates briefly a project carried out with parents of six slow-learning children in which the parents were involved in a structured effort to hear their children read. Parents attended six evening sessions, one per week, in which they were given information about, instruction in, and support for listening to their children read. Discussed were such topics as selecting appropriate reading materials, setting up a reward system, and keeping systematic records. Children were in the 8-9 year old age range. Mean gains in reading age over the 18 weeks of the project are reported using scores on the *Neale Analysis of Reading Ability*. Mean gain for all six children was 9.2 months in both accuracy and comprehension..

FRY, LYN. Remedial reading using a home-based token economy. In Keith Topping & Sheila Wolfendale (Eds.) *Parental Involvement in Children's Reading*. New York: Nichols Publishing Co., 1985, 173-180.

Evaluates the effectiveness of parents' systematic use of token reinforcement in teaching word-recognition skills to disabled readers. Chronological ages of the 30 children involved ranged from 7-1 to 10-11 at the start of the two-month experimental program. Reading ages on the ***Burt Word Recognition Test*** ranged from 4-5 to 7-0 years. Three group meetings were held with parents in order to introduce the program; two individual at home sessions were also conducted with each set of parents. All children continued in their regular reading program, but received, in addition, 15-minute sessions at home. A token reward system was established in each home. Word recognition data were collected two months prior to the experimental sessions, just prior to the beginning, at the end of the two-month period, and again two months later. The mean gain in the two-month period prior to starting the experimental program was 1.9 months; at the end of the program, mean gain was 8.33 months; two months after the program, the mean gain was 1.97 months.

YOUNG, PETER, & TYRE, COLIN. *Dyslexia or Illiteracy?* Milton Keynes, England: The Open University Press, 1983.

Cites research and writings related to dyslexia and the difficulties involved in defining and establishing criteria for it. After a review of the research in dyslexia, the authors conclude that there is not single characteristic of dyslexia identified in the literature other than a difficulty with reading. This difficulty may have a variety of causes and manifestations. It is contended that because different children have different difficulties, little purpose is served by labelling them as a discrete category. Reported also are the results of an action research project with 15 children between the ages of 8 and 13. All 15 were two or more years retarded in reading. Additionally 15 pupils in a matched group and 15 in a control group were involved. Dyslexics and matched pupils received 30 minutes of parental instruction in reading daily over a year. All children in both parent taught groups tested markedly superior in reading to controls at the end of the year.

GLYNN, TED. Remedial reading at home. In Keith Topping, & Sheila Wolfendale (Eds.) *Parental Involvement in Children's Reading*. New York: Nichols Publishing Co., 1985, 181-188.

Introduces a home remedial tutoring program to parents of eight 8-to 12-year-old New Zealand boys with reading deficits of two to five years. Parents were trained in their homes. All tutoring sessions were taperecorded. Tapes were analyzed for: (1) percentage of delay of tutor response to reading errors, (2) percentage of prompts to reading errors, and (3) three types of praise (self corrections, prompted corrections, other responses). Children averaged gains of 1.4 monhts in book level read over the one-month baseline data collected period and 6.5 months over the 2.5 months of tutoring. A second study with parents of four 10 year old boys was conducted in an innercity Birmingham, England, school. Results were similar to those in New Zealand.

BRYANS, TREVOR; KIDD, ANNE; & LEVEY, MARIE. The Kings Heath project. In Keith Topping, & Sheila Wolfendale (Eds.) *Parental Involvement in Children's Reading*. New York: Nichols Publishing Co., 1985, 231-240.

Gives brief information on each of four phases of a project in Great Britain in which parents used a variation of paired reading with their children. Phase 1 involved nine children in the first year of a comprehensive secondary school. Pretest data on the *Neale Analysis of Reading Ability* indicated children had reading ages of about nine years. Paired reading was conducted for 15-minute daily periods for five weeks. On the Neale posttests, reading accuracy showed an increase of almost 10 months, but comprehension and rate each showed decreases of about four months. Phase 2 involved 11 children in the same school selected as having a reading problem. Reading accuracy on the Neale showed a six months average improvement over the five-week intervention period. Phases 3 and 4 were conducted in a primary school. The 15 poorest readers in a first-year junior class were selected for inclusion; parents of 11 agreed to participate. Children gained one to five months on the Neale, a difference which was not significant. Phase 4 gave similar results.

CARBO, MARIE. Matching reading styles: Correcting ineffective instruction. *Educational Leadership*, October 1987, *45*, 55-62.

Puts together pilot field research results on reading styles conducted in five school districts. Pilots used the *Reading Style Inventory* to identify children's reading styles as well as to make recommendations for methods, materials, and strategies. Although little information is provided, it is reported that reading achievement increased while discipline problems decreased.

WORDEN, THOMAS W., & FRANKLIN, MARY R. Adapting tutorial techniques to perceptual modalities of deficient readers. *Educational Research Quarterly*, 1986-1987, *11*(1), 40-48.

Assesses the effects on reading comprehension of matching teaching techniques and strategies to perceptual strengths of below grade level readers. Subjects were 72 second and third grade pupils in Chapter One reading classes. Perceptual style was assessed using the *Reading Style Inventory*, Part II, and an informal author-developed assessment. Three groups of 24 pupils each were formed: predominantly visual, predominantly kinesthetic, and controls. Alternate forms of the Passage Comprehension subtest of the *Woodcock Reading Mastery Tests* and the Word Recognition in Isolation graded word lists of the *Basic Reading Inventory* were administered as pre- and posttests. Children were instructed in groups of 12 twice weekly for 30 minutes over four months. Instruction emphasized word recognition skills. Both experimental groups scored significantly higher than the control group on both measures.

SHORT, ELIZABETH J.; SHERIDAN, E. MARCIA; & ANES, LOUISE. Learning to read better: Training decoding, comprehension and perceptual skills for poor readers. *Reading Horizons*, July 1986, *26*, 223-241.

Offers a program appraisal technique designed to evaluate an elementary remedial reading instructional program. Emphasized in this program were: (1) visual-perceptual training; (2) decoding; (3) oral reading; and (4) comprehension. A number of pupils participated over a five-year period, with numbers varying from 52 to 95, with some 6% being black and less than 1% being Spanish surnamed. Program participants had been selected on teacher recommendations, had scores below the 50th percentile on the reading subtest of the *Stanford Achievement Test* (SAT), and an individually administered word recognition test. Work was provided in the four emphases by a teacher with a trained aide for an hour daily, four days a week. SATs were administered during the fall and spring of each year to all children. Findings supported the ability of the Learning to Read Better Program to help pupils improve poor reading skills. Greater growth in reading was obtained by participating children as compared with children not involved in the investigation directly. In addition, program participants obtained reading achievement scores vastly superior to their expected scores for any of the five years.

Vickery, Karen S.; Reynolds, Valarie A.; & Cochran, Samuel W. Multisensory teaching approach for reading, spelling, and handwriting, Orton-Gillingham based curriculum, in a public school setting. *Annals of Dyslexia*, 1987, *37*, 189-200.

Reports results of a four-year experimental project utilizing the Multisensory Teaching Approach for Reading, Spelling, and Handwriting (MTARSH) Program. The approach began with six pupils in a remedial class and gradually expanded so that three years later all pupils in both remedial and regular classes in grades one through six were receiving the MTARSH program. First graders received 25 minutes of instruction daily; all others received 55 minutes daily. Over the four year period, 282 remedial and 144 nonremedial pupils were given the program. Evaluation was done by means of the *California Achievement Test* (CAT). Statistical analyses and observational trends both suggested that CAT scores in spelling and reading improved for all pupils over baseline scores. In addition, there was a tendency for CAT mean scores to increase corresponding to the number of years pupils were in the MTARSH Program except for fourth grade.

Fisher, Gary L.; Jenkins, Stephen J.; Bancroft, Mary J.; & Kraft, Lois M. The effects of K-ABC-based remedial teaching strategies on word recognition skills. *Journal of Learning Disabilities*, May 1988, *21*, 307-312.

Designs a study to examine the effects of matching teaching strategies with cognitive processing strength in order to increase word recognition skills in disabled readers. The children ranged in age from 7 to 12 years old and were all enrolled in a university reading and learning disability clinic. Based on performance on the *Kaufman Assessment Battery for Children* (K-ABC), children were classified into a sequential group (n = 5), a simultaneous group (n = 14), and a mixed group (n = 23). Trained tutors taught children groups of 10 words each in 20-30 minute sessions twice weekly for a total of 210 words. Three different teaching strategies (sequential, simultaneous, and mixed) were utilized with each pupil, and there were four sessions per teaching strategy. Word recognition of the 10 words taught was assessed after each individual session; recognition of the 40 words taught under one strategy was assessed at the session immediately following the final session of a teaching strategy and also two weeks later. While there was a consistent pattern in the direction of an aptitude-treatment interaction, no significant interaction was found.

Palincsar, Annemarie Sullivan, & Brown, Ann L. Teaching and practicing thinking skills to promote comprehension in the context of group problem solving. *Remedial and Special Education*, January-February 1988, 9(1), 53-59.

Describes how reading and listening comprehension can be taught in an integrated approach using the instructional technique of reciprocal teaching. Six years of research on using reciprocal teaching with poor comprehenders was briefly reviewed. The four strategies involved in this instructional approach (questioning, summarizing, clarifying, and predicting) were explained and illustrated. Reciprocal teaching was portrayed as a problem-solving approach conducted in a cooperative setting that involves social interaction and student-led discussion.

Bush, Avril. Paired reading at Deighton Junior School. In Keith Topping, & Sheila Wolfendale (Eds.) *Parental Involvement in Children's Reading*. New York: Nichols Publishing Co., 1985, 136-142.

Describes a project with the acronym of PRINT (Paired Reading Involving Non-Teachers), a program conducted in a British junior school located in an area of high unemployment and poor housing conditions. The first five phases of PRINT ocvering about a year-and-a-half were evaluated using the *Neale Analysis of Reading Ability*. Average improvement in comprehension ranged from 14.7 months in Phase 5 to 18.7 months in Phase 1. Numbers of children involved ranged from seven (Phase 1) to 35 (Phase 4). The Neale Analysis was subsequently dropped and the *Edinburgh Reading Tests* introduced as the evaluative measure in Phase 9. A brief discussion of nonquantifiable information is presented.

Topping, Keith. Peer tutored paired reading: Outcome data from ten projects. *Educational Psychology*, 1987, *7*(2), 133-145.

Reviews briefly 10 projects using paired reading with peer tutoring, all conducted by classroom teachers in one local authority in England. Numbers of tutees involved in the projects ranged from 4 to 35, and their ages ranged from 8 to 14 years; ages of tutors ranged from 8 to 17. Seven different reading tests were used in the various projects. Each project and its outcome are briefly described. In general, the evidence strongly supported the use of peer tutored paired reading. Both tutors and tutees gained in reading skills. Tutees in cross-age projects seemed to gain more than tutees in age-peer projects. Tutors appeared to gain more than tutees in age-peer projects.

Burdett, Linda. Two effective approaches for helping poor readers. *British Journal of Special Education*, December 1986, *13*, 151-154.

Compares the effectiveness of two approaches to aiding poor readers, a paired reading approach and an individualized approach. Two primary schools in Hong Kong were used with 24 children selected from each school. Pupils either had reading ages one year or more below chronological age or were considered by the teacher as being able to benefit from extra help in reading. The age range in the two schools was from 7.6 to 11.4 years. In School A, the headmaster selected the children and assigned them to the paired reading (PR), individualized reading (IR), or control (C) groups. In School B, children were assigned randomly to the three groups. Additionally, some parents were asked to become involved (PR+ and IR+). Treatment lasted for eight weeks with experimental groups receiving three 5-minute individual reading periods per week with the researcher and two individual sessions per week with their teacher. Further, PR+ and IR+ groups received 5- to 10-minute sessions per week at home. Pre- and posttest scores on the *Widespan Reading Test* were collected. Both experimental groups showed greater gains than did controls with reading gains being retained four weeks after treatment had ceased. Parental involvement did not make a difference.

Andrews, N., & Shaw, J.E.H. The efficacy of teaching dyslexics. *Child: Care, Health and Development*, January/February 1986, *12*, 53-62.

Studies 86 children attending a London dyslexia clinic to determine the effectiveness of a specific instructional program for reading and spelling improvement, and whether the pattern of improvement varies for those labeled as having specific retardation (2 years below level predicted from age and IQ) and those labeled as backward (less than 2 years below expected reading or spelling age). Degree of retardation was determined by performance on the Schonell tests of reading and spelling, and the full scale WISC-R. Specific reading retardation was used as synonymous with dyslexia. Also of interest was the influence of the individual teacher in the treatment. Teaching was a highly structured, multisensory program, with main emphasis on phonics, reinforced by visual and tactile input. Children participated in a 30-40 minute session on a weekly basis for up to a four-year period. Statistically significant differences in reading and spelling were found for the backward group, and in spelling for the severe retarded group. Differences in patterns of progress were found for both groups, with both groups continuing to maintain or improve progress, but the backward group improving more in spelling than in reading with extended treatment. Between-teacher differences were found, with one teacher producing a far greater mean spelling improvement than reading improvement with her students.

ALGOZZINE, BOB; O'SHEA, DOROTHY J.; STODDARD, KIM; & CREWS, W. BEE. Reading and writing competencies of adolescents with learning disabilities. *Journal of Learning Disabilities*, March 1988, *21*, 154-160.

Analyzes the performance of 1,098 learning disabled and 934 regular 10th grade students on the Florida state minimum competency test, the *State Student Assessment Test-II* (SSAT-II), and assesses the congruence between the communication skills tested on the SSAT-II and the skills perceived as important by employers. The test, a 75-item instrument, assessed 15 communication skill areas in a multiple choice format, with mastery set at four of five items within a subset of communication skills. Nonhandicapped students had 91% mastery, while special class peers had 49%. Nonhandicapped students answered 83% of total items correctly, and learning disabled students answered 63% correctly. Best rates of reading mastery for special students were for skills involving literal recall, while lowest scores in reading and writing involved application of skills. A 34-item questionnaire was completed by 249 employers, with results indicating that reading and writing were important in the jobs available and that reading was viewed as slightly more important than writing. Students with learning disabilities demonstrated higher levels of mastery (greater than 50%) on 80% of the skills employers believed were commonly used in job-related activities. Such students tended to do well on the same skills on which nonhandicapped students demonstrated competence, even though their level of mastery was lower on all skills.

SINATRA, RICHARD, & VENEZIA, JENNIE F. A visual approach to improved literacy skills for special education adolescents: An exploratory study. *Exceptional Child*, November 1986, *33*, 187-192.

Explores the relative effectiveness of a visual literacy program used with academically disabled adolescents. Participants were 50 boys and 20 girls enrolled in a special secondary school on the basis of a diagnosis brain-injured, learning disabled, emotionally handicapped, language impaired, hyperactive, neurologically impaired, perceptually impaired, or mentally retarded. Of the 70 adolescents, 31 scored in the normal IQ range, 27 were identified as dull-normal or borderline, and 12 as educable or trainable retardates. Subjects received a visual composition approach during one school year as part of their overall language arts instruction. The program involved the use of at least 20 visual stories, each consisting of a series of slides. At the first viewing of the slides, subjects were asked to write a central theme statement. In a second and slower-paced viewing, participants were to write a phrase or sentence for each slide based on the central idea. These were rewritten and edited into a composition which was then presented to the class and rated on five criteria. Pre- and posttreatment writing samples were obtained and scored as were comprehension scores. Only students in the normal IQ group achieved a significant gain in reading comprehension. Writing improvement was demonstrated by all groups.

MOORE, VANESSA, & CALLIAS, MARIA. A systematic approach to teaching reading and spelling to a nine-year-old boy with severely impaired literacy skills. *Educational Psychology*, 1987, *7*(2), 103-115.

Describes the progress of a nine year old boy of normal intelligence but with retardation in reading and spelling. Both areas were taught in half-hour lessons twice weekly over a three months period while he was seen as an outpatient of a London psychiatric hospital. A remedial reading scheme was followed. Reading material was presented in the structured manner and in the order designated by the scheme for 15-20 minutes during each individual session. Records were maintained of his reading responses and of the tokens earned. Baseline data, end of treatment data, and follow-up data were collected using the *Neale Analysis of*

Reading Ability along with the number of words read correctly in each lesson. Substantial gains were shown on all assessment measures including at the 14 months follow-up period. Disparity between spelling age and chronological age narrowed only during the treatment phase involving a machine and not during an earlier phase when he was taught rules.

SOMERVILLE, DAVID E., & LEACH, DAVID J. Direct or indirect instruction?: An evaluation of three types of intervention programme for assisting students with specific reading difficulties. *Educational Research*, February 1988, *30*, 46-53.

Notes the effect of three intervention programs (psychomotor, self-esteem enhancement, and direct instruction) and a control group on the reading achievement of 40 Australian children (mean age = 10-11) referred because of reading problems. Mean reading age was 8-10 on the *Schonell Word Recognition Test*. Intervention programs were conducted during weekly one-hour Saturday afternoon sessions over a 12-week period. Assessment measures included the Schonell, psychomotor skills, and self-esteem, all given as pre- and posttests. Questionnaire data were also obtained about pupil, teacher, and parent perceptions of the programs. The direct instruction group achieved significantly higher scores on the Schonell than did the other three groups which did not differ significantly from one another.

O'CONNOR, GERARD; GLYNN, TED; & TUCK, BRYAN. Contexts for remedial reading: Practice reading and pause, prompt and praise tutoring. *Educational Psychology*, 1987, *7*(3), 207-223.

Trains 14 residential childcare workers in New Zealand to implement both a Practice Reading and the Pause, Prompt, and Praise procedures with 18 primary school age children with reading difficulties. Children were in the residential program for six to eight weeks. A group of 49 children who received only the standard reading program in the residential program was used for comparison purposes. Ten minute morning individual sessions were conducted in the school setting, and 90 minute evening sessions in the cottage setting. Three levels of intervention were possible: (1) Practice Reading only in both sessions; (2) Pause, Prompt, and Praise in one setting; or (3) Pause, Prompt, and Praise in both settings. Pre- and posttest measures were the *Neale Analysis of Reading Ability*, accuracy and comprehension, and the *Glenburn Prose Inventory*. Data on oral reading errors and on tutor behaviors were also collected. Experimental children made significant gains on the standardized measures and made accelerated progress through graded book levels, while comparison children did not.

FLARO, LLOYD. The development and evaluation of a reading comprehension strategy with learning disabled students. *Reading Improvement*, Winter 1987, *24*, 222-229.

Examines the effectiveness of a reading comprehension strategy involving imaginal processes, verbal mediation, and neurolinguistic programming to create meaningful associations and connections between past knowledge and experiences and text information. Subjects were 24 Canadian fourth and fifth grade learning-disabled children, reading at least two years below grade level. Resource teachers identified 16 boys and 8 girls as having moderate to severe reading comprehension deficits. The *Canadian Tests of Basic Skills* (CTBS) were administered as a pretest before the 15-week treatment and as a posttest following treatment. Teachers received inservice in the six-step comprehension strategy and in techniques for modeling the strategy and for giving verbal feedback to pupils. Children participated in an individual session with the teacher to learn the procedure and to receive feedback, before their placement in small reading groups. Statistically significant differences were found between pre- and posttest means on the CTBS. There was a gain in grade equivalent reading comprehension of about eight months after participation in the treatment.

Stevens, Robert J. Effects of strategy training on the identification of the main idea of expository passages. *Journal of Educational Psychology*, March 1988, *80*, 21-26.

Compares four methods of teaching remedial students to identify the main idea of expository paragraphs. A total of 47 students, grades 6 through 11, who had been assigned to remedial reading classes served as subjects. Participants were randomly assigned to one of four methods of instruction: (1) strategy training, (2) classification training, (3) strategy and classification training combined, and (4) practice only. All instruction was delivered through a computer-assisted delivery system. Criterion-referenced measures developed specifically for the study were used for pre- and posttesting. The posttest assessed ability to identify main ideas in topics similar to the training materials as well as in different subjects. An analysis of covariance revealed significant treatment effects for both strategy training and classification training; however, the classification training did not transfer as well to novel material. There was also some evidence that students who received strategy training transferred their knowledge to inference questions on passages of similar topics.

Darch, Craig, & Carnine, Douglas. Teaching content area material to learning disabled students. *Exceptional Children*, November 1986, *53*, 240-246.

Evaluates the effectiveness of using visual spatial displays (graphic organizers) when teaching 24 4th, 5th, and 6th grade learning disabled (LD) pupils science and social studies materials. Pupils were assigned to either a Visual Display group or a Text group, with IQ and reading achievement similar for both groups. Instruction took place in the LD classroom, with 50 minute sessions for nine consecutive days. Both groups had the same teacher and were taught the same content. The Visual Display group was introduced first to labeled and then unlabeled visual displays. Pupils then worked in groups to review materials and complete unlabeled visual displays. The Text group read the text with the teacher and answered questions following a prescribed technique. After each unit of instruction, pupils took a five-item probe test. At the conclusion of all instruction, they took a nine-item literal comprehension posttest, followed a day later by a five-item transfer test. All pupils also rated the instruction. The Visual Display group significantly outperformed the Text group on all probe tests and on the posttest. Transfer test results were not significantly different. No differences were found for enjoyment of the procedure or the unit, but the Visual Display group felt they had learned more from the unit.

Wilson, Rich; Majsterek, David; & Southern, W. Tom. Content area programming for secondary learning disabled students. *Reading Improvement*, Fall 1987, *24*, 193-197.

Describes teaching/learning strategies, many research based, that would be appropriate for use by content area teachers who have responsibilities for teaching learning disabled students in secondary schools.

V-11 Teaching bilingual/other language learners

Espinosa, Ruben, & Ochoa, Alberto. Concentration of California Hispanic students in schools with low achievement: A research note. *American Journal of Education*, November 1986, *95*, 77-95.

Includes all public elementary schools (n = 4,268) and public high schools (n = 791) in California for 1977-78 in an effort to examine the achievement of Hispanic, limited-English-proficient (LEP), and black students. Ethnic and language data from the R-30 state data were combined with California Assessment Program (CAP) data for grades 3, 6, and 12 to form the information base. The lowest percentile of CAP reading scores has 46,851 elementary pupils. Of these, blacks accounted for 19,301 and Hispanics for 24,993. There were 633,810 students in the bottom quartile of CAP reading scores at grades 3, 6, and 12. Hispanics made up 44.9% and blacks, 22.4%, of the bottom quartile. By grade three, 80% of Hispanic, LEP, and black pupils were attending schools that were below the fiftieth percentile on pupil academic achievement scores. As the concentration of Hispanic and black students increased by school, the average school CAP achievement scores decreased.

SO, ALVIN Y. Bilingual education and Hispanic reading achievement. *Contemporary Education*, Fall 1987, *59*, 27-29.

Investigates the impact of elementary school bilingual education on the high school reading achievement of Hispanic students. Included were 30,090 Hispanic sophomores and seniors who reported Spanish as their mother tongue and who were required to take English courses for non-English speakers in the elementary school. Socioeconomic status (SES) and language of instruction (all or almost all English, evenly mixed English/Spanish, all or almost all Spanish) were used as independent variables with reading achievement tests administered in English as the dependent variable. Limited English speaking and non-English speaking students in mixed language classrooms performed better than students in predominantly English classrooms, regardless of SES background. Reading achievement was lowest for students who had been in predominantly Spanish classrooms.

VERHOEVEN, LUDO TH. Literacy in a second language context: Teaching immigrant children to read. *Educational Review*, November 1987, *39*, 245-261.

Reviews selected research from both sociolinguistic and psycholinguistic perspectives into literacy education for immigrant children. Under the sociolinguistic aspects, discussion includes the literacy needs of immigrant groups, three types of language policies which regional and national authorities can follow relative to literacy, and monolingual and bilingual literacy instructional models the policies give rise to. The psycholinguistic perspective includes a discussion of the processes of learning to read in a first or a second language, temporal variation in learning to read in a first or second language, and interdependencies in first and second language reading. Arguments for bilingual literacy education are summed up and include outcomes of evaluation studies.

GLYNN, TED, & GLYNN, VIN. Shared reading by Cambodian mothers and children learning English as a second language: Reciprocal gains. *Exceptional Child*, November 1986, *33*, 159-172.

Studies the effects of a shared reading program on the reading of five Cambodian mothers and their children. Three of the mothers (Group 1) had received one year of schooling in Cambodia while two (Group 2) had received no schooling. All children were in regular primary school reading programs in New Zealand and were also receiving help through the English as a Second Language (ESL) program. Mothers and children read to each other from reading books, always before a home audience of children and adults. During the intervention phase, the ESL teacher visited each mother-child pair to introduce and monitor the shared reading procedure. Approximately once a week, tape recordings were made of each mother and child reading individually to the ESL teacher. Errors were recorded and categorized. All five children showed gains in reading progress over the 24-week period. Rate of gain during shared reading was greater than during the baseline period. Group 1 mothers made gains as substantial as those of their children. Group 2 mothers made smaller progress.

BROWN, JAMES D.; CHEN, YONGPEI; & WANG, YINGLONG. An evaluation of native-speaker self-access reading materials in an EFL setting. *RELC Journal*, June 1984, *15*(1), 75-84.

Ascertains the appropriateness of self-access reading materials, originally designed for American elementary school children, for adult Chinese learners of English as a foreign language (EFL). The EFL subjects numbered 118; all were scientists. The self-access materials consisted of two sets of cards, each containing a reading passage followed by multiple-choice comprehension and vocabulary questions. One set of cards was reported to range from readability levels 3.5 to 11.0, while the other set spanned grade levels 8 to 14. The easier set was divided into 10 levels with 15 cards each; the more difficult set, 7 levels with 20 cards each. Placement tests were given to all students at the beginning and end of the 10-week period when the materials were used. In addition, the *Michigan Placement Test* (MPT) reading subtest and the *Test of English as a Foreign Language* (TOEFL) reading subtest were administered at the end of 10 weeks. Students used the reading materials for at least one hour daily over the 10-week period. Materials were analyzed for scientific accuracy and readability levels; reliabilities of the placement tests were determined; learning gains were assessed by means of pre- and posttest scores on the placement tests; and student attitudes were assessed. About 27% of the easier set and 37% of the harder set of cards were on or related to science. Considerable variation in the readability level of cards within a given level was found. Students showed a significant gain on the TOEFL subtest and on the placement test. Reliability estimates of the placement tests ranged from .00 to .37; validity coefficients of the pre- and postplacement test with TOEFL scores ranged from .00 to .50 and with MPT scores from .05 to .24. Students felt the materials were useful.

BRUTTEN, SHEILA R. An analysis of student and teacher indications of vocabulary difficulty. *RELC Journal*, June 1981, *12*(1), 66-71.

Determines if English as a Second Language (ESL) teachers and students agree on which words cause meaning difficulty. The 35 intermediate students in the third level of a four-level intensive English program and 12 teachers were asked to identify the words in a 956-word passage which would create difficulty in reading for meaning. Students selected 191 words and teachers, 122; 110 were common to the two groups.

HAGUE, SALLY A. Vocabulary instruction: What L2 can learn from L1. *Foreign Language Annals*, May 1987, *20*, 217-225.

Summarizes five theories set forth to explain the relation between word knowledge and comprehension of text and provides a brief overview of research in this area. Implications are then drawn for second language practitioners.

MANGUBHAI, FRANCIS. Literacy in the South Pacific: Some multilingual and multiethnic issues. In Daniel Wagner (Ed.) *The Future of Literacy in a Changing World*. Elmsford, NY: Pergamon Press, 1987, 186-206.

Sketches briefly literacy and education in the South Pacific and then reports on the Book Flood Project in Fiji. Twelve schools with a total of 614 grade 4 and 5 pupils were identified for the Book Flood Project. In eight of the schools, books were placed and children read daily for 25-30 minutes in lieu of an English lesson activity; the other four schools received no books and carried on with their normal English lesson. The eight experimental schools were further subdivided into two groups of four with two approaches to using the books: shared book reading and uninterrupted sustained silent reading. At the end of eight months, grade 4 pupils were administered tests of reading comprehension, English structures, word recognition, and oral sentence repetition. Pupils in grade 5 received tests in reading and listening comprehension, English structures, and writing. The two experimental groups outperformed the controls significantly on all reading measures. Similar results were found at the end of the second year when children were in grades 5 and 6. No differences were found between the two experimental approaches.

V-12 Tests and testing

V-12a Factors in test performance

Perez, JoEllen V.; Homan, Susan P.; Hines, Constance V.; & Kromrey, Jeffrey D. Reading ability, comprehension, and test validity: Effects of three procedures for administering test items. *Journal of Educational Research*, November-December 1987, *81*, 116-119.

Compares the effects of three different test administration procedures on test performance of third-grade pupils reading below grade level ($n = 64$), on grade level ($n = 68$), and above grade level ($n = 73$). Three passages, each accompanied by seven questions, were presented in three conditions: silent, oral or listening only, and look-listen. Each passage was administered only once under a given condition to pupils of a given ability level. For all three ability groups, the highest mean performance with the look-listen procedure was superior to silent reading ($p < .05$). The oral or listening procedure was significantly more effective ($p < .05$) than silent reading for above average and average readers only.

Cardarelli, Aldo F. The influence of reinspection on students' IRI results. *Reading Teacher*, March 1988, *41*, 664-667.

Investigates the influence that reinspection of text has on the determination of pupil functional reading levels on a commercially prepared informal reading inventory. Subjects, 47 fourth graders, individually read passages from the *Analytical Reading Inventory* (ARI) silently, starting at one grade level below the instructional level identified by the pupil's reading teacher. Passages were removed before asking questions, following ARI recommended procedures. When frustration level was reached on Form A, pupils were given the passage at the same level from Form B. Pupils read the passage and were instructioned to make reference to it, if needed, while answering questions. Given the opportunity to reinspect a passage at the frustration level, 70% of the pupils answered at least one more question correctly on Form B than on Form A and 53% were able to answer at least two more questions correctly. Data suggested that over half would have made gains sufficient to change functional reading level from frustration to instruction, if reinspection behavior was included in the diagnostic procedure.

Sharma, V.P. Effectiveness of test-types on high- and low-achievers. *Indian Educational Review*, October 1985, *20*(4), 78-89.

Estimates the effectiveness of types of test questions (essay, short answer, objective, and mixed form) for 40 high- and 40 low-achievers chosen on the basis of total achievement scores on the annual promotion examination in one Indian high school. Subjects were taught for an equal duration (45 class periods) by the same teacher, using both the situational and traditional methods. Situational methods emphasized analysis and synthesis of words and thoughts and stressed the command of spoken language at the same time as practice in reading. Four identical evaluation tools were created from the two types of content taught, and students were tested at the completion of each of the two approaches. Students' papers were scored twice, with a lapse of four months between scoring. A 4x2x2 factorial design for the method of teaching and testing was employed. Wilcoxon Matched Pairs Signed Ranks tested the significance of difference among mean scores. When both methods were considered together, high- and low-achievers had highest scores on objective types of questions. In the situational method for high-achievers, essay questions were more effective than mixed form, followed by objective and then by short-answer questions. In the traditional translation method for low-achievers, objective questions were more effective than essay, short answer, or mixed forms. High achievers showed better proficiency in the situational method on all types of questions.

Hannon, Peter, & McNally, Joe. Children's understanding and cultural factors in reading test performance. *Educational Review*, November 1986, *38*, 237-246.

Analyzes the test performance of three groups of English school children from middle-class, working-class, and non-English speaking homes to determine how multiple choice sentence completion is influenced by understanding of what is read and by culture. Seventy-two primary children, mean age 8, and equally divided by sex, were given the 38 item *NFER Reading Test A*, first as a measure of silent reading, and then as an oral reading assessment one week later. Oral administration was assumed to be a valid measure of understanding: if children responded correctly under oral test conditions, then they had sufficient understanding for the silent reading test performance to be considered a valid measure of reading ability. Errors made on the oral test were significantly different for the three groups, with middle class children making few errors. English-as-a-second-language children missed one-third of the items, while children in the working class group missed one-fourth of the items. The order of errors was similar on the silent reading condition, but even more errors were produced by children in the working class and second language groups. Biserial correlation coefficients between reading test performance and social class were high (.75) and significant at the .001 level. The authors concluded that understanding of test items varied with cultural background, and was partly responsible for the social class differences in test performance.

Benson, Jeri; Urman, Harold; & Hocevar, Dennis. Effects of test-wiseness training and ethnicity on achievement of third- and fifth-grade students. *Measurement and Evaluation in Counseling and Development*, January 1986, *18*, 154-162.

Investigates the effects of test-wiseness training, ethnicity, and sex on reading and mathematics achievement. A total of 12 intact third and fifth grade classes were randomly assigned to either an experimental or control condition. Children were also categorized as to ethnicity and sex. The reading and mathematics sections of the *Stanford Achievement Test* were administered as a pretest. Pupils in the experimental group received three 30-minute training sessions on test-wiseness. The training covered four topics: following directions, using time wisely, guessing strategies, and answer changing. Two weeks after the treatment children took another form of the Stanford. One month later they took the *Comprehensive Test of Basic Skills* as a delayed posttest. Significant training effects were found only for mathematics at the fifth grade on both the posttest and delayed posttest. One significant sex difference was found for third-grade girls in mathematics. The effects of race favored the white children.

Kerstiens, Gene. A testimonial on timed testing: Developmental students and reading comprehension tests. In Malcolm P. Douglass (Ed.) *Claremont Reading Conference Fiftieth Yearbook*, 1986, 261-268.

Conducts a study of the effects of timing on reading comprehension scores of 95 community college students. The reading section of the *Cooperative English Test* was administered first as an untimed test to yield a comprehension score. Two days later, an alternate form was administered under timed conditions. Students' scores on timed reading comprehension correlated .61 with the number of items attempted. Students responded at 35% accuracy to items on the timed test. There was no relation between speed at which students responded and accuracy of responses on either the timed or untimed versions of the test.

Dyer, Henry S. The effects of coaching for scholastic aptitude. *NASSP Bulletin*, February 1987, *71*(496), 46-53.

Examines the effects of coaching on performance on the *Scholastic Aptitude Test* (SAT). SAT coaching was briefly discussed from a historical perspective. The results of 12 studies were summarized in an effort to determine the effects of coaching on test scores. Six of the 10 studies that considered verbal scores showed significant improvement; 7 of 11 studies showed significant improvement in mathematics scores. Emphasis was given to factors such as the standard error of the test, the motivation of examinees, variations in length and content of coaching programs, all of which contributed to the mixed findings of studies.

V-12b Predictive studies

YULE, VALERIE. Assessing children's silent reading. *Educational Research*, November 1987, *29*, 192-196.

Describes and evaluates an experimental technique for assessing silent reading. A small group of British primary school children, ages 7 to 8.5, was asked to read one of two selections, a fairy tale with difficult spelling and a modified version of a Wordsworth sonnet. The children were directed to mark every word they thought they could read. At a later time, pupils were asked to read the same passages orally for their teacher who marked oral reading accuracy. A comparison was made between children's self-scoring and the teacher's scoring. Although a word-for-word correspondence of accuracy between oral and silent reading was not found, there was a close match between the pupils' personal judgments and the teacher's ratings. This close match was evident for all ability levels.

ALTROWS, IRWIN F.; MAUNULA, STEPHEN; & LALONDE, BRIAN D. Employing teachers' ratings in selection of achievement tests in reading and mathematics with a behaviorally disturbed population. *Psychology in the Schools*, July 1986, *23*, 316-319.

Compares end-of-the-year teachers' ratings of children's functioning grade level in math and reading with results of standardized tests. Subjects were 66 behaviorally disturbed children and adolescents. The following measures were administered: Reading Recognition, Reading Comprehension, and Mathematics subtests of the *Peabody Individual Achievement Test* (PIAT); the Reading and Mathematics subtests of the *Wide Range Achievement Test*; the *Stanford Diagnostic Reading Test*; the *Stanford Diagnostic Mathematics Test* (SDMT); and the *Key Math Diagnostic Arithmetic Test*. Some subjects were tested in the fall and others, later in the school year. Teachers were given test scores and interpretation, and were asked, in April, to estimate current grade levels of children in the two areas. The SDMT and PIAT predicted teachers' ratings equally well in mathematics and were superior to the other tests. In reading, all tests predicted teachers' ratings equally well except for the PIAT Reading Comprehension which was somewhat lower than the others.

RICHGELS, DONALD J. An investigation of preschool and kindergarten children's spelling and reading abilities. *Journal of Research and Development in Education*, Summer 1986, *19*, 41-47.

Tests preschoolers and kindergarteners for alphabet knowledge, metalinguistic awareness, spelling ability, and ability to read. Subjects included 11 children from two classes for 4 year olds in a private school, 11 kindergarteners from a private school, and 8 kindergarteners from a university laboratory school. Five letter tests were given: alphabet recitation, alphabet flashcard identification, finger-point alphabet reading, completion of a sequence of six letters when given the first three, and a test requesting how five pairs of letters were alike. In addition, children were asked to spell 10 words and then to read either their spellings or the conventional spellings of the words. Correlation coefficients were computed between spelling test performance and performance on each of the letter tests, and between reading performance and the various measures. Coefficients of spelling with the letter tests ranged from .138 (How alike?) to .642 (six-letter completions). Only 14% of the words were spelled conventionally.

Vacc, Nicholas A.; Vacc, Nancy N.; & Fogleman, Martha Sawyer. Preschool screening: Using the DIAL as a predictor of first-grade performance. *Journal of School Psychology*, Spring 1987, *25*, 45-51.

Investigates the predictive validity of the *Developmental Indicators for the Assessment of Learning* (DIAL), a norm-referenced, preschool screening instrument intended to identify children with potential learning problems. A sample of 245 kindergarten children were administered the DIAL four months before entering school and the *California Achievement Test* (CAT) at the end of first grade. Additional demographic information was also collected. Results of a canonical correlation found the DIAL Concepts subtest to be the best overall predictor of CAT scores, although the DIAL Fine Motor subtest was also a significant predictor. Selected demographic variables such as race, SES, and gender were also effective predictors for specific CAT subtests.

Collis, Betty; Ollila, Lloyd O.; & Yore, Larry D. Predictive validity of the Canadian Readiness Test and selected measures of cognitive development for grade one reading and mathematics achievement. *Alberta Journal of Educational Research*, March 1986, *32*, 2-11.

Studies the predictive validity of various readiness measures and Piagetian tasks to first grade reading and mathematics achievement. A sample of 99 Canadian pupils was administered the seven subscales of the *Canadian Readiness Test* (CRT) and six Piagetian tasks in September of grade one. In May of the same school year, they were given the reading components of the *Stanford Achievement Test* and a locally developed mathematics battery. Intercorrelation coefficients between predictor variables and correlates are presented. When the CRT subscales were taken as one set of predictors, a significant relationship was found between CRT and reading achievement and CRT and mathematics achievement. When the Piagetian tasks were examined to determine if they added to the predictive power of the CRT, two tasks (Number Conservation and Seriation) were significant for mathematics and two tasks (Number Conservation and Liquid Conservation) were significant for reading. Overall, the Piagetian tasks contributed relatively little to the prediction of either reading or mathematics achievement.

Cloer, Jr., C. Thomas. Comparing the predictive validity of a state-mandated readiness test with informal visual discrimination tasks. *Journal of Reading Education*, Spring 1988, *13*(3), 2-12.

Compares the predictive validity of the *Cognitive Skills Assessment Battery* (CSAB), a state-mandated readiness test in South Carolina, with three informal visual discrimination tasks. The CSAB and the visual discrimination tasks were administered to 48 kindergarten children in the fall of the year. The Word Attack, Vocabulary, Comprehension, and Total scores of the *Comprehensive Test of Basic Skills* (CTBS) served as the dependent variable. It was found that the three visual discrimination tasks correlated more highly with the CTBS scores than the CSAB did.

Badian, Nathlie A. The prediction of good and poor reading before kindergarten entry: A nine-year follow-up. *Journal of Learning Disabilities*, February 1988, *21*, 98-103, 123.

Examines the predictive validity of the *Holbrook Screening Battery* (HSB). The 15 subtests comprising the HSB were administered to 180 four year olds. In grade eight, 116 of the original children were given the *Stanford Achievement Test* (SAT) as a criterion measure. A stepwise multiple regression was computed with SAT Reading Comprehension serving as the dependent variable. The HSB subtests of Information, Sentences, Letters, and Counting had the highest coefficient of correlation with eighth-grade reading achievement. The multiple coefficient of the total battery with reading was .67. Approximately 89% of the good readers and 75% of the poor readers were correctly predicted from the total HSB score nine years earlier. Nine of the 12 children identified as poor readers at grade eight had been declared at risk at age four but failed to achieve normally in spite of special help. The poor readers were 2.6 times more likely to have a history of two or more birth complications, 2.7 times more likely to have a family history of learning disability, 3.3 times less likely to be first-born, 3.4 times more likely to have speech delay, and 3.6 times more likely to belong to the lowest socioeconomic groups.

Close, John S.; Martin, Michael O.; & Lindsey, James F. Mathematical vocabulary of primary school pupils: A pilot study. *Irish Papers Presented at Fourth European Reading Congress and Tenth Annual Conference of the Reading Association of Ireland*, 1985, 106-122.

Conducts a study of the usefulness of the Wiebe/Cox *Mathematical Vocabulary Reading Inventory* (MVRI) with Irish pupils; and examines development of children's mathematical vocabulary, the relation between knowledge of mathematical vocabulary and general mathematical knowledge, and the ability of the subtests of the MVRI to predict performance on tests of general mathematical knowledge. Children from 9 classes in Standard 1 (n = 275), 10 classes in Standard 3 (n = 300), and 9 classes in Standard 5 (n = 273) were given the MVRI as well as the appropriate level of the *Drumcondra Attainment Test in Mathematics* (Standards 3 and 5) or the *Drumcondra Criterion-Referenced Test in Mathematics* (Standard 1). Reliability coefficients for the MVRI ranged from .89 at 5th Standard to .92 at 3rd Standard. Mean percentage scores on the subtests of the MVRI increased with number of years in school. Subtest scores indicated that the ability to recognize mathematical terms (sight recognition) and to relate them to the appropriate form in other representational modes (matching) appeared to develop earlier than the ability to find a synonym for a mathematical term (synonyms) or to place the term in an appropriate context (cloze procedure). Correlation coefficients between the total MVRI and the total Drumcondra mathematics scores were .53, .71, and .63, respectively, at Standards 1, 3, and 5.

Karnes, Frances A.; Edwards, Ron P.; & McCallum, R. Steve. Normative achievement assessment of gifted children: Comparing the K-ABC, WRAT, and CAT. *Psychology in the Schools*, October 1986, *23*, 346-352.

Compares scores for gifted children on the *Kaufman Assessment Battery for Children* (K-ABC) to scores obtained on the *Wide Range Achievement Test* (WRAT), the *California Achievement Test* (CAT), the WISC-R, and the *Stanford-Binet Intelligence Test* (SB). Subjects were 41 intellectually gifted pupils in grades 4, 5, and 6, all with an IQ of 130 or above on the SB or any one of the three WISC-R IQ scales. Varying numbers of the children received each of the tests. Both K-ABC Achievement and Mental Processing scores were obtained. In general, K-ABC mental ability scores were lower than WISC-R and SB IQs. Coefficients of correlation of K-ABC achievement scores were: .42 with WISC-R Verbal IQ, .40 with SB IQ, .16 with WISC-R Full Scale IQ, and .09 with WISC-R Performance IQ. Coefficients of K-ABC Reading Decoding and Reading Understanding subtest scores ranged from .01 to .44 with various WRAT and CAT subtest scores.

Canavan, Patrick: Kraemer, Diane; Brannigan, Gary G.; & Hijikata, Susan. Torque as a predictor of reading achievement. *Journal of Genetic Psychology*, September 1987, *148*, 349-356.

Assesses the utility of the *Torque Test* as a predictor of reading performance for 149 children, 82 males and 67 females, ranging in age from 5-14. Subjects were given the *Torque Test*, the *Harris Test of Lateral Dominance*, the *Wide Range Achievement Test* (WRAT), and the *Bender Gestalt Test* in randomized order. A quasi-experimental, counterbalanced, observation design was employed, with torque (left, right, and both hands/total torque) as the independent variable. Correlation coefficients were statistically significant, although low, between Torque and WRAT reading scores, Torque and Bender scores, reading disability and Bender error scores, and Bender error scores and WRAT grade level scores. Relationships between reading disability and scores on the Harris Test were not statistically significant. Factor analysis of the data using 9 of the original 20 variables extracted 3 factors: years in school, WRAT grade level, Bender Gestalt, and knowledge of left and right loaded on Factor 1; preferred hand, total torque, and total dominance loaded on Factor 2; and sex loaded on Factor 3. Data suggest that the measures of torque and the scores from the Harris Test contribute little to prediction of reading ability, whereas Bender error scores appear to have a significant relation with WRAT scores.

ERCHUL, WILLIAM P.; STACEY, DENNIS C.; & ATWOOD, CAROL W. Predictors of ability-achievement discrepancies in children referred for psychoeducational evaluation. *Psychology in the Schools*, January 1986, *23*, 27-33.

Attempts to identify the best predictors of special education needs in terms of ability-achievement difference scores. Subjects were 61 pupils in grades one through five in a small town rural school system, all of whom had been referred for psychoeducational testing. Children were administered the WISC-R, *Slosson Intelligence Test* (SIT), *Peabody Picture Vocabulary Test-Revised* (PPVT), *Developmental Test of Visual-Motor Integration* (VMI), composite reading and mathematics subtests of the *California Achievement Test* (CAT), and the reading recognition and math subtests of the *Peabody Individual Achievement Test* (PIAT). In a first analysis, SIT IQ, PPVT, VMI, CAT reading, SIT IQ-CAT reading difference score, and PPVT-CAT reading difference score were considered as predictors of WISC-R-PIAT reading recognition difference score. SIT IQ and PPVT-CAT reading accounted for 27% of the variance in the criterion. In a second analysis, PPVT accounted for 28% of the variability in WISC-R-PIAT math difference score.

LEWIS, C.M. Vocabulary, sentences and words: Testing for agreement between two recent measures of reading performance and receptive vocabulary. *Educational Psychology*, 1987, *7*(2), 129-132.

Reports an exploratory study that examines the relation among two British reading tests and a receptive vocabulary test. A sample of 38 first year junior pupils (mean age of 7-9) was administered the *Salford Sentence Reading Test* (SSRT), the *British Ability Scales Word Reading Test* (BAS WRT), and the *British Picture Vocabulary Scale* (BPVS). These tests were chosen because they had been developed relatively reently and were quick and easy to administer. Results found that all intercorrelation coefficients were positive and highly significant. The BPVS correlated .43 with the SSRT and .51 with the BAS WRT. The two reading tests correlated .88 with each other. When mean scores were used, it was found that pupils scored significantly lower on the BAS WRT than on the SSRT.

SHAUGHNESSY, MICHAEL F.; SMALL, DIANE M.; & EVANS, ROBERT. The Nelson Denny Reading Test as a predictor of success in automotive technology. *New Mexico Journal of Reading*, Spring 1988, *8*(3), 17-18.

Examines the relation between the *Nelson Denny Reading Test* (NDRT) and performance in an eleven-month automotive technology program. Thirty-four junior college students were given the Vocabulary and Comprehension sections of the NDRT in the fall of the school year. High School GPA, college GPA, and attendance data also served as predictor variables. Criterion variables were midterm GPA, final GPA, and course grade. High school GPA was the best predictor of performance in the program, accounting for 41% of the variance. The Vocabulary subtest of the NDRT increased the variance accounted for to 47%. No other predictor variables were significant.

Dole, Janice A.; Harvey, Steven A.; & Feldman, Virginia Simon. The development and validation of a listening comprehension test as a predictor of reading comprehension: Preliminary results. *Educational Research Quarterly*, 1984-1985, 9(4), 40-46.

Describes the development of the *Simon-Dole Listening Comprehension Test* (SDLCT) and examines its concurrent and predictive validity. The SDLCT consisted of 19 short passages and 38 items that assessed literal and inferential listening comprehension. The SDLCT was administered to 321 kindergarten children at the beginning of the year; the *Boehm Test of Basic Concepts* (BTBC) was administered at the beginning and end of kindergarten; and the *Comprehensive Test of Basic Skills* (CTBS) was given at the end of first grade. A maximum-likelihood exploratory factor analysis, followed by generalized structural equation modeling techniques, was used to investigate the proposed theoretical relation between listening and reading. Results showed a moderately strong relation between SDLCT and BTBC (.62 and .42) and SDLCT and CTBS (.34). A language comprehension factor was found to predict all three initial tests and account for a significant amount of the variance in first-grade reading achievement. The SDLCT was found to be as good a predictor of reading achievement as the BTBC.

V-12c Cloze testing

Levenston, E.A.; Nir, R.; & Blum-Kulka, S. Discourse analysis and the testing of reading comprehension by cloze techniques. In A.K. Pugh, & J.M. Ulijn (Eds.) *Reading for Professional Purposes*. London: Heinemann Educational Books, 1984, 202-212.

Proposes the use of a modified cloze technique, discourse cloze, to assess reading comprehension. First, the inferencing process used in completing traditional cloze tasks was analyzed into three components: linguistic, pragmatic, and textual. It was argued that because of the random nature of deletions, traditional cloze does not distinguish between micro-level and macro-level processing. Second, to overcome this weakness, the discourse cloze procedure was recommended because it focuses on macro-level processing. In discourse cloze, only markers of co-reference and connectives between propositions and markers of inter-propositional connectives are deleted, thus restricting deletions to endophoric reference only. Third, a pilot study conducted with 400 Israeli sixth-graders was reported in which discourse cloze was compared to traditional cloze. Results suggested that discourse cloze has the ability to distinguish between different levels of achievement in reading.

Laesch, Kelley Bowers, & van Kleeck, Anne. The cloze test as an alternative measure of language proficiency of children considered for exit from bilingual education programs. *Language Learning*, June 1987, *37*, 171-189.

Assesses the validity of the *Language Assessment Scales* (LAS) and a cloze test in determining language proficiency of third graders considered for exit from bilingual programs. The 28 children were administered the LAS, the *California Test of Basic Skills* (CTBS), and two 50-item cloze tests. Based upon cloze test scores, children were placed within independent, instructional, and frustration levels and an error analysis of cloze responses made. Errors were scored as either syntactic, semantic, or global. The correlation coefficient between the cloze test and LAS scores was .25; LAS correlated .18 with CTBS total score while cloze test scores and CTBS total correlated .74. Error analysis of cloze scores indicated children who scored at the independent level tended to make fewer errors, and the errors they made were of a more sophisticated nature.

SABHARWAL, V.K. Verbatim or free-fillers for cloze passages. *Indian Educational Review*, January 1986, *21*(1), 1-14.

Compares two methods of scoring cloze tests: using exact replacements (verbatim fillers) and using synonyms (free fillers). Two prose passages, one narrative and one descriptive, were converted into cloze tests by using every 5th, every 6th, and every 7th word deletions, thus creating six forms. A sample of 458 Indian students from grades 10, 11, and 12 of a senior secondary school was tested. Each student completed one narrative and one descriptive form of the tests. The tests were scored using both verbatim fillers and free fillers. Results showed that free-filler scoring yielded significantly higher means and standard deviations for both types of prose, for all three deletion systems, and across all grade levels tested. Free-filler scoring also yielded higher reliability.

HANANIA, EDITH, & SHIKHANI, MAY. Interrelationships among three tests of language proficiency: Standardized ESL, cloze, and writing. *TESOL Quarterly*, March 1986, *20*, 97-109.

Explores the use of a cloze test as a supplemental ESL measure for college students. A sample of approximately 500 applicants to the American University of Beirut was given three measures: (1) the AUB test, a locally developed 200-item test similar in content and purpose to other ESL proficiency tests; (2) a written cloze test; and (3) a free-response written composition task. Results showed that all three measures correlated highly with each other. A multiple regression analysis was conducted rotating each test as the criterion measure. It was found that a combination of any two measures significantly increased the predictability of the third measure.

HOMAN, SUSAN P.; PEREZ, JOELLEN V.; & LOEWE, KENNETH L. Cloze procedures, as comprehension measures for blacks and whites. *Florida Reading Quarterly*, December 1987, *24*(2), 10-15.

Investigates the relation between performance on standard cloze (SC) tests and multiple choice cloze tests (MCC) and the effects of restricting deletions in SC and deletions and distractors in MCC. Subjects were black and white adult examinees enrolled in teacher preparation programs in the state of Florida. Subjects read passages selected from the Domain of Reading Materials identified by the Florida Department of Education. Deletions and distractors were selected by a computer program, with two distractors selected for each multiple choice item. Passages were analyzed and determined to be restrictive or nonrestrictive, dependent on the language feature tested. Each passage was prepared in four formats: MN, multiple choice with nonrestricted items; MR, multiple choice with restricted items; SN, standard with nonrestricted; and SR, standard with restricted. Each examinee read one passage in each format. Responses that were syntactically and semantically acceptable were accepted for SC passages. A 2x2x2 analysis of variance with repeated measures on procedure and language was performed. Significant main effects were observed for race and for procedure, favoring the multiple choice cloze. The main effect for language was not significant. A significant interaction was observed for procedure and race, but not for language and race or procedure and language. An overall correlation coefficient of .28 was obtained between the SC and MCC, suggesting that the two procedures measure different aspects of reading comprehension.

WEARE, JANE; HEISTERKAMP, JOANNE; & BORTHWICK, PAUL. A comparison of the cloze and maze procedures as predictors of reading comprehension. *Mississippi Reading Journal*, Spring 1987, No.14, 14-18.

Explores whether the cloze procedure or the maze procedure is a better predictor of reading comprehension for a classroom teacher to use in monitoring comprehension in a reading program. Subjects were 21 fifth graders in a private school who took the *Stanford*

Achievement Test (SAT) and the maze and cloze procedures developed for the study. Three passages were developed for each procedure, and were administered to subjects in a pilot. the maze form and the cloze form with the highest correlation were used in the present study. Correlation coefficients between the SAT and the cloze and maze procedures were r=.75 and r=.71. The researchers concluded that both measures were adequate predictors of reading comprehension.

Stephens, Elaine C.; Weaver, David R.; Ross, G. Alexander; & Emond, Susie B. The cloze procedure as predictor of undergraduate achievement in introductory courses. *Forum for Reading*, Fall/Winter 1986, *18*(1), 32-36.

Studies the usefulness of the cloze procedure as a predictor of success or failure in four college classes: political science, sociology, psychology, and biology. In the first portion of the study, six tests were based on five textbooks recommended for introductory level students in political science. Pearson correlation coefficients were calculated for the students' cloze scores on the six tests, and for their final grade in the class. Coefficients were positive, ranging from .318 to .590. In the second phase, cloze tests were developed for the other three subject areas. The coefficient between cloze test results and final class grade was .492. Positive linear associations between cloze test results and final class grades held across the three classes, although relations across the three classes were not identical in strength. Between 20% and 33% of the variance in course grade was accounted for by cloze test results.

Gamarra, April Ginther, & Jonz, Jon. Cloze procedure and the sequence of text. In John E. Readence, & R. Scott Baldwin (Eds.) *Research in Literacy: Merging Perspectives*. Thirty-sixth Yearbook of The National Reading Conference, 1987, 17-24.

Reports an investigation that centered on the sensitivity of a standard fixed-ratio cloze procedure to variation in textual sequence. A total of 252 subjects, 128 undergraduates and 124 graduates, was randomly partitioned into control (naturally sequenced text) and experimental (scrambled text) groups. Each of these was further randomly partitioned again into two sub-groups according to the topic of the passage to which each was subjected, resulting in a total of four randomly created groups of approximately equal sizes. Two naturally occurring texts of approximately equal length and difficulty level were selected, each representing opposite tendencies on a continuum of inherent structuredness. One was a passage loosely organized, concerned with descriptive matter about woodpeckers; the other, a condensed version of a study. The woodpecker possessed little discernible inherent structure; the study passage, tightly knit. Four test passages with 50 deletions each were created and ordered; two in their origianal order exactly as they occurred in the published sources, and two in a scrambled manner purposely designed to cause maximum interruption of the inherent sequentiality of each segment. Scores on sequentially ordered text were substantially higher than scores on scrambled text. Scrambling the tightly knit passage had a significantly greater effect on cloze test scores than did scrambling the woodpecker passage.

V-12d Test uses and purposes

Farr, Roger, & Carey, Robert F. *Reading: What Can Be Measured?* Newark, DE: International Reading Association, 1986.

Presents a review of selected research on issues and problems in the measurement of reading and provides guidelines for the improved use of reading tests. After opening with a chapter on the role of testing in educational practice and issues in the validity of tests and recommendations for their improved use, subsequent chapters review studies on assessment of reading comprehension, word recognition, vocabulary, study skills, and reading rate.

Chapters conclude with recommendations for test consumers and for needed research. An additional chapter focuses specifically on reliability and validity issues, including types of validity, norming, and scoring issues. A chapter on acountability raises general problems in competency testing. A final chapter considers three issues with potential for shaping the future of reading assessment: rethinking basic assumptions; matching decision making needs of educators; and developing new techniques, formats, statistics, and more usable test score reports.

GREANEY, VINCENT, & MADAUS, GEORGE F. Accountability in education: Lessons from the Primary certificate examination experience. *Proceedings of the Ninth Annual Conference of the Reading Association of Ireland*, 1984, 199-223.

Traces the experience in Ireland using the Primary School Certificate (PSC) examination. The PSC was used from 1943 to 1967 and was an external examination, required of all sixth class pupils, which certified successful completion of primary school education. First raised as a suggestion in 1925 by the Minister for Education, the PSC was introduced on an optional basis in 1928. Despite opposition, it was made mandatory in 1942 and administered in 1943 to all sixth standard pupils who had attended at least 100 days of school during the previous year. With time, the minimum skills embodied in the exam became the maximum standard. Retention figures showed an increase following adoption of the compulsory PSC, but a decrease after a campaign by the inspectorate to improve the promotion rate. Analysis suggested that academically weaker pupils were frequently retained until they reached the age of 14 and could leave school without sitting for the PSC. Figures between 1943 and 1947 indicated a marked decrease in the percentage of pupils completing sixth class with less than 60% of children who entered sixth class receiving the PSC. Evidence suggested that a narrowing of the curriculum occurred following the advent of the PSC and teaching became stylized to meet the exam requirements. A parallel is drawn between the PSC and the minimum competency movement in the United States.

LAPOINTE, ARCHIE. Test results provide data useful to educators planning to improve schools. *NASSP Bulletin*, March 1987, *71*(497), 73-78.

Encourages researchers to use the National Assessment of Educational Progress (NAEP) data base to discover patterns that can influence curriculum and educational policy. The 1984 NAEP 11th grade sample is described. Results are presented from the Reading and Writing assessments as well as from the student, teacher, and principal questionnaires. In addition, the 1984 results are compared to previous NAEP findings in an effort to formulate trends in reading and writing performance.

KELLAGHAN, THOMAS, & MARTIN, MICHAEL O. Issues in the use of teacher's judgements and norm-referenced standardised tests to assess reading achievement. In Vincent Greaney, & Brendan Molloy (Eds.) *Dimensions of Reading*. Dublin: Educational Company of Ireland, 1986, 106-118.

Reviews studies dealing with teachers' evaluative activity in classrooms with special reference to test usage. The limited evidence available suggests that teachers do not rely heavily on standardized test results in their assessment of children or in planning instruction. Cited was one study which found correlation coefficients ranging from .54 to .67 between teacher ratings of pupils' reading and test scores. Evidence from other studies viewing relative bias in tests and teacher assessments indicated that teachers' assessments are influenced by children's sex, age, physical appearance, social behavior, personality characteristics, and social class. However, one study reviewed found that teachers exhibited bias on fewer characteristics than did tests. Work in Ireland by one of the authors also supported the view that teacher expectancy was functioning both when teachers were given test information and when they were not.

LANGE, DALE L., & LOWE, JR., PARDEE. Rating reading passages according to the ACTFL reading proficiency standard: Can it be learned? *Foreign Language Annals*, May 1988, *21*, 227-239.

Examines the extent to which users can apply the American Council on the Teaching of Foreign Languages (ACTFL) form of the *Interagency Language Roundtable Reading Proficiency Scale*. Participants in a one-week workshop were first introduced to the ACTFL scales and then asked to rate and rank a sample of 11 texts using the scales. After the initial tasks, participants spent most of the workshop writing items for a college entrance standard and graduation test that was to be used to meet a new language requirement. Following a series of focus rounds with sample passages, participants submitted their final rankings and ratings of the 11 sample passages. Results indicated that participants could use the scales to rank passages from easiest to hardest and could rate passages according to the criteria in the scales.

DUFFY, GERALD G.; ROEHLER, LAURA R.; MELOTH, MICHAEL S.; POLIN, RUTH; RACKLIFFE, GARY; TRACY, ANN; & VAVRUS, LINDA. Developing and evaluating measures associated with strategic reading. *Journal of Reading Behavior*, 1987, *19*(3), 223-246.

Describes and evaluates four measures designed to assess the effects of reading strategy instruction. The four measures were: (1) interviews following skill lessons to assess children's declarative, situational, and procedural knowledge of the lesson content; (2) paper and pencil multiple-choice tests (Supplemental Achievement Measures) which assess pupil reasoning when using specific strategies in a setting outside the insructional context; (3) a modified graded oral reading paragraph procedure (GORP) which assesses pupils' reasoning while reading connected text; and (4) Concept Interviews which assess the children's awareness that reading is a strategic process generally. The measures were administered to selected pupils in 20 elementary classrooms. Results showed that all four measures discriminated between children who had received experimental strategy instruction and those who had not received such instruction. Significant correlation coefficients were also found among many of the measures. The limitations of each measure are discussed and recommendations for their use suggested.

SHANAHAN, TIMOTHY. A survey of student literacy experiences in a large-scale state assessment. In John E. Readence & R. Scott Baldwin (Eds.) *Research in Literacy: Merging Perspectives*. Thirty-sixth Yearbook of The National Reading Conference, 1987, 35-41.

Describes preliminary results of pilot testing of a new survey test being developed in Illinois. Data from 1,069 eighth-grade students were included in the preliminary report. The test surveyed students self-report data in four areas: (1) literacy instruction, (2) functional uses of literacy, (3) home academic experiences, and (4) reading strategies. Some 40% indicated that they usually considered what their readers know when writing; 24% stated that they never shared their writing with others in class, and 48% said that they did so only occasionally. On social aspects of literacy, 32% never considered why an author has written a particular text, 42% indicated that they never tell their friends about books they've read, and 62% said that they only occasionally write to share ideas. One half of the students reported that their parents placed no controls on the amount of television viewing done, while 70% of them said that their parents regularly checked to see that homework was correctly done.

V-12e Test reliability and validity

TULLEY, MICHAEL A., & FARR, ROGER. A comparison of four methods of determining instructional reading levels. *Reading Psychology,* July-September 1987, *8,* 149-168.

Examines the validity of estimates of instructional reading level (IRL) produced by the Reading Comprehension Test of the 1986 *Metropolitan Achievement Test* (MAT). Four methods of estimating IRL were compared: MAT scores, basal reader placement tests, an informal reading inventory (IRI) derived from MAT reading comprehension test passages, and classroom teacher judgments. Subjects included 100 at grade 2, 98 at grade 4, and 91 at grade 6. Each subject took the appropriate level of the MAT and a basal reader placement test. IRIs were individually administered to 25 children randomly selected from each grade level. Teachers also reported their estimates of instructional reading levels for these children. Three analyses of data were conducted: comparisons of percentages of agreement among estimates of IRL, comparisons of the mean of each estimate and a composite IRL estimate, and comparisons of MAT estimates with the average estimate produced by each of the measures. Results suggested a high percentage of agreement at each level between the MAT estimates and estimates provided by the other measures. Rarely did percentage of agreement differ by more than one grade level, and frequently estimates of IRL's were exactly the same for the various measures.

DUFFELMEYER, FREDERICK A.; LONG, JENNIFER; & KRUSE, ANNE. The passage independence of IRI comprehension question categories: Evidence of nonuniformity. *Reading Improvement,* Summer 1987, *24,* 101-106.

Investigates the passage independence of comprehension questions across subskill categories on two informal reading inventories: Form A of the *Basic Reading Inventory* (BRI), and Form B of the *Informal Reading Inventory* (IRI). Ten elementary school pupils at each of grade levels one through six responded to questions from the BRI at their respective grade levels under a passage-absent condition. A second group of 60 elementary pupils from a separate community was administered questions from the IRI under like conditions. Percent correct scores were calculated for each subskill category on the two inventories. On the BRI, scores ranged from 2% correct for main idea to 80% correct for evaluation questions. On the IRI, percent correct scores ranged from 3% for main idea and sequence questions to 35% for inference questions.

MARGOLIS, HOWARD, & MCCABE, PATRICK. The reliability of the Analytical Reading Inventory with disabled readers: Implications for diagnosis. *Reading Instruction Journal,* Winter 1988, *31*(2), 7-10.

Assesses the reliability of alternate forms of the *Analytical Reading Inventory* for use in diagnosing pupils previously identified as having reading disabilities. Subjects, 31 children who had been enrolled in a university tutoring program for approximately 8 months, were tested individually. Forms A and B of the inventory were administered to all pupils; half received them in the sequence A-B-A, and half in B-A-B. Subjects read the middle form silently. Spearman rank-order correlation coefficients were obtained, correlating oral with oral, and oral with silent passages for each sequence and for identified independent, instructional, and frustrational level. Reliability estimates on Form A approached .90; Form B yielded such a coefficient at the independent level only. The coefficient of determination for the oral-silent comparison accounted for about 50% of the variance, suggesting differences in the oral and silent reading process.

JOELS, ROSIE WEBB, & ANDERSON, BETTY. Informal reading inventory comprehension questions: Are classification schemes valid? *Reading Horizons,* Spring 1988, *28,* 178-184.

Does a study of the *JAT Reading Inventory* to determine if the four question types (literal, inference, vocabulary, and application) have discriminant validity. Randomly selected pupils in grades 2-5 from two elementary schools were given Form A JAT Passages. There were 38 pupils who scored two to four levels below grade placement, and their scores on question types were studied. Of the 38, 31 scored below 60% accuracy in at least one question type category and only five failed to achieve at least a 75% accuracy in at least one category. The authors conclude that the findings support the discriminant validity of the JAT as a diagnostic tool.

FUCHS, LYNN S.; FUCHS, DOUGLAS; & MAXWELL, LINN. The validity of informal reading comprehension measures. *Remedial and Special Education*, March-April 1988, 9(2), 20-28.

Assesses and compares the criterion, construct, and concurrent validity of four informal reading comprehension measures: question answering tests, recall measures, oral passage reading tests, and cloze techniques. Subjects were 50 learning disabled, 16 emotionally disturbed, and 4 mentally retarded boys, ages 9 to 15. The Word Study Skills and Reading Comprehension subtests of the *Stanford Achievement Test* and four informal measures, each based on a 400-word traditional folktale, were administered. Only 35 randomly selected subjects were given the oral reading test. Administration order of measures was counterbalanced. Mean coefficient of correlation between Stanford scores and the question answering test was .74. Coefficients between the Stanford and the recall measure ranged between .66 and .82. Mean number of words read correctly per minute on the oral passage correlated .89 with Stanford scores. Cloze procedure scores with Stanford scores correlated .72 for exact responses, .79 for synonym responses, and .66 for syntactically matching responses. When construct validity was explored, it was determined that the oral passage reading test correlated more strongly with the Stanford than did any of the other three measures. For concurrent validity, intercorrelation coefficients, except for the oral reading error scores, within and between informal measures were moderate to high.

KIPPEL, GARY M., & WEINER, MAX. National percentiles for California Achievement Text and comparable scores on Degrees of Reading Power test. *Perceptual and Motor Skills*, June 1987, *64*, 860-862.

Compares national percntiles on two tests administered to over 2,000 students in each of grades 3-9. Comparable scores were identified by using equipercentile and regression methods on test results obtained from administering the *California Achievement Test* (CAT), Forms C and D, and the *Degrees of Reading Power Test* (DRP), PA series, to the same students. CAT and DRP scores differed at most grade levels. DRP national percentiles ranged from 1 (grade 9) to 7 (grade 5) percentile points above their corresponding CAT national percentiles when the equipercentile method was used, and from no difference (grade 6) to 4 percentile points difference (grades 5 and 8) when the regression method was used. The researchers suggest that differences among the national percentiles for any grade may not reflect substantive differences in reading performance, and likely reflect differences in the norm groups or the manner in which national norms are determined. They urge caution when interpreting relationships between national percentiles from different tests.

BEN-YOCHANAN, AVRAHAM, & KATZ, YAACOV. Validation and use of a school readiness battery in an Israeli elementary school integration program. *Perceptual and Motor Skills*, June 1987, *64*, 1083-1087.

Administers a school readiness test battery to 40 lower socioeconomic Israeli preschoolers and notes its effectiveness for predicting scores on an end of grade one achievement test battery. The readiness battery consisted of the Information and Similarities subtests on the WPPSI, the *Gesell Reading Readiness Test*, and the *Minkowich Test of Arithmetic Readiness*. First grade tests included the *Israel Test of Reading Comprehension* and the *Israel First*

Grade Comprehensive Arithmetic Test, both group instruments, and the individually administered *Israel Test of Reading Rate and Accuracy*. The total preschool battery correlated .61 with both reading comprehension and arithmetic scores, .38 with reading rate, and .37 with reading accuracy. The Gesell and Minkowich combined scores correlated .75 with comprehension scores at the end of first grade. The two latter readiness measures gave a Multiple R of .82 with the total grade one battery.

YOPP, HALLIE KAY. The validity and reliability of phonemic awareness test. *Reading Research Quarterly*, Spring 1988, *23*, 159-177.

Investigates the validity and reliability of 10 tests of phonemic awareness. Over a two-month period, 10 phonemic awareness tests (e.g., phoneme blending, phoneme counting, phoneme deletion, rhyming, phoneme segmentation, sound isolation, word-to-word matching, and phoneme reversal) were administered to 96 kindergarten children. In addition, the pupils were also given an auditory discrimination test and a criterion learning test that assessed the ability to use sound-symbol correspondences to decode artificial words. Reliability estimates for the individual measures ranged from .58 to .96. Results indicated that rhyming was the easiest task and phoneme deletion the most difficult. Intercorrelations among the various phonemic awareness tests were determined. A factor analysis revealed two factors that underlie the construct of phonemic awareness. Although each test of phonemic awareness was significantly related to the criterion learning test, predictive validity coefficients ranged from .27 to .72.

WOODWARD, PAUL J.; SVINICKI, JAY G.; & CARROW-WOOLFOLK, ELIZABETH. A factorial study of the Carrow Auditory-Visual Abilities Test with normal and clinical children. *Journal of Speech and Hearing Disorders*, August 1987, *52*, 223-231.

Reports a factor analysis of the *Carrow Auditory-Visual Abilities Test* (CAVAT), a battery designed to assess visual and auditory perception. The CAVAT is comprised of five visual subtests and nine auditory subtests. The battery was administered to approximately 1,000 normal children ranging in age from 4 through 10, and 141 clinical children, classified as either language or learning disabled. Results indicated that two basic factors accounted for a great portion of the total variance. The subtests that loaded on the first factor were Visual Discrimination Matching, Visual Discrimination Memory, Visual Motor Copying, Visual Motor Memory, Motor Speed Accuracy, Picture Memory, and Auditory Blending. Picture Sequence Selection, Digits Forward, Sentence Repetition, Word Repetition, and Total Word Repetition all loaded on the second factor. Digits Backward, Sentence Repetition, Auditory Discrimination in Noise, and Auditory Discrimination in Quiet did not fall clearly into one of the factors. No significant differences in the factor matrix were found between normal and clinical children.

SMITH, RICHARD M. Assessing partial knowledge in vocabulary. *Journal of Educational Measurement*, Fall 1987, *24*, 217-231.

Examines methods of assessing partial knowledge on multiple-choice vocabulary items. A stage of vocabulary acquisition model served as the theoretical basis for developing a 50-item test of general English vocabulary. Weighted options consisted of sound-like/look-like words, context words, antonyms, close words, and synonyms. The experimental test was administered to approximately 400 college students and adults who were clients of a vocational counseling organization. A traditional vocabulary test was also administered for purposes of determining concurrent validity. The experimental test was scored using both dichotomous and polychotomous models. Results were analyzed using Rasch ability estimate techniques and a subset of items that showed the best fit to both the dichotomous and polychotomous scoring models was selected. Similar validity and reliability estimates were found between dichotomous and polychotomous scoring for the 50-item test; however, the subtest of

16 best-fit items showed significantly higher validity and reliability estimates for polychotomous scoring.

Hooper, Stephen R. Relationship between the clinical components of the Boder Test of Reading-Spelling Patterns and the Stanford Achievement Test: Validity of the Boder. *Journal of School Psychology*, Spring 1988, *26*, 91-96.

Conducts a concurrent validity study of the *Boder Test of Reading-Spelling Patterns*. Included in the study were 87 reading-disabled pupils, aged 8-4 to 12-5. Children were administered the Vocabulary, Word Study Skills, Reading Comprehension, and Spelling subtests of the *Stanford Achievement Test* (SAT) as well as the Boder. For younger children, the letter/word recognition and comprehension sections of the SAT were administered. Both Reading Grade Level and Reading Quotient on the Boder were significantly related to SAT reading subtests. Boder Reading Grade Level coefficients for younger children were .55 with comprehension and .80 with letter/word recognition; Boder Reading Quotient coefficients were .51 and .79, respectively, with comprehension and letter/word recognition. For SAT reading subtests with older children, coefficients with Reading Grade Level ranged from .64 to .80, and with Reading Quotient from .26 to .45.

Owen, Gorden, & Erchul, William P. The Wide Range Achievement Test–Revised: How much has it been improved? *Measurement and Evaluation in Counseling and Development*, April 1987, *20*, 44-48.

Reviews the revised edition of the *Wide Range Achievement Test*. Background information was presented on the standardization and norming of the test, the types of scores, reliability, and validity. Concerns were raised about the representativeness of the norming sample, the relation between WRAT-R scores and classroom functioning and other achievement measures, and the absence of evidence supporting content validity. Cautions are presented regarding its use.

Spruill, Jean, & Beck, Brett. Relationship between the WRAT and WRAT-R. *Psychology in the Schools*, October 1986, *23*, 357-360.

Determines the equivalence of the *Wide Range Achievement Test* (WRAT) and the newly developed WRAT-R as measures of achievement for 45 adult clients referred to a university psychological clinic by vocational rehabilitation agencies. Subjects (32 blacks, 13 whites) had a mean age of 25 years. Most subjects had less than a high school education. Mean WAIS-R IQ scores were 77, 77, 78, respectively, for Full Scale, Verbal, and Performance scales. Subjects were given Level II of the WRAT-R, with order of the administration of the subtests counterbalanced. Half received the items in the order they were sequenced on the original WRAT, and half received the items in the sequence of the WRAT-R. As the items on the WRAT-R contain all the items on the previously developed WRAT, only one test administration was necessary. Correlation coefficients between the WRAT and the WRAT-R were significant (.98 for reading, .97 for spelling, and .79 for arithmetic). WRAT-R standard scores were significantly lower, 8-11 points, than WRAT scores.

Neale, Marie D.; McKay, M. F.; & Childs, G. H. The Neale Analysis of Reading Ability-Revised. *British Journal of Educational Psychology*, November 1986, *56*, 346-356.

Outlines the major features of the revision and restandardization of the *Neale Analysis of Reading Ability*, 1984 edition. Data are presented from approximately 1,100 children from the two Australian states who served as the sample for the restandardization. Children were drawn from 44 schools in Victoria and 58 schools in South Australia. Equal numbers of boys and girls were tested, and children were chosen to reflect contemporary ethnic mix in Australia. Children were administered two revised forms of the Neale and supplementary language and cognitive tests such as the *Schonell Graded Word Reading Test*, portions of the *WISC-R*, and subtests of the *Neale Scales of Early Childhood Development*. Order effects were counterbalanced by variations in administration. Raw scores for number of errors in word recognition, number of correct answers, and time taken to read aloud were recorded for each passage. Information was also gathered on developmental history, language background, and instructional methods used to teach reading. Results suggest that boys and girls did not differ significantly in performance, except in speed of reading and word recognition, where girls read faster and scored more accurately than boys. Scores on the new edition differed from the earlier edition.

COOKSEY, RAY W., & FREEBODY, PETER. Aspects of a computer-managed test of children's reading vocabulary: Reliability, validity, and characterization of knowledge. *Reading Psychology*, April-June 1987, *8*, 103-118.

Examines the reliability and validity of a computer-managed assessment of reading vocabulary (CMARV). A total of 43 students from grades 4, 7, and 10, stratified by grade and ability levels, were individually administered a 340-item vocabulary test. Ability levels were determined by teacher ratings. The test consisted of 220 English words selected on the basis of representative frequencies and 120 nonsense words. The words were presented, one at a time, on a computer and subjects were asked to make a yes/no decision as to whether they knew each word. Yes rates to real words were corrected by the yes rates to nonsense words. Following the CMARV, students were asked to discuss, in an interview, the meanings of 60 randomly selected words from the test. the overall reliability estimate, using split-half procedures, was .96 for the group. A moderate degree of agreement (.73) was found between test performance and the posttest interview. However, discrepancies for low-ability students were greater than those for medium- and high-ability students. Additional analysis found that the probability of word knowledge, as measured by the CMARV, followed a normal ogive curve. Using the theoretical normal ogive curve model, estimates were made of the rate of vocabulary growth and total size of students' vocabulary.

COTTER, SUSAN A.; ROUSE, MICHAEL W.; & DELAND, PAUL N. Comparative study of the Jordan left-right reversal test, the reversals frequency test, and teachers' observations. *American Journal of Optometry & Physiological Optics*, March 1987, *64*, 195-203.

Compares pupil performance on the *Jordan Left-Right Reversal Test* (JRT) and the *Reversals Frequency Test* (RFT) with teacher judgments of reversal problems. A sample of 636 children, ages 6 through 13, was tested. A total of 510 pupils were drawn from regular classrooms and 126 from learning handicapped classes. Each child was administered the JRT and the RFT, norm-referenced tests designed to assess reversal errors in children. In addition, each pupil's classroom teacher indicated whether or not the pupil had a reversal problem. Pass/fail results were compared for all three measures. Low to moderate agreement was found between the JRT and RFT for normal pupils but not for learning handicapped children. The degree of disagreement appeared to be related to age. Only low agreement was found between teacher judgments and either test. For younger learning handicapped children, the degree of agreement did not surpass chance.

BROWN, JAMES D. A norm-referenced engineering reading test. In A.K. Pugh, & J.M. Ulijn (Eds.) *Reading for Professional Purposes*. London: Heinemann Educational Books, 1984, 213-222.

Reports the development and tryout of a test of reading comprehension in engineering English. The test was designed to distinguish foreign students who could successfully read graduate level engineering texts from those who could not. The test consisted of three passages on engineering topics with 20 items per passage. The test was administered to American engineering students, American TESL students, Chinese engineering students, and Chinese TEFL students. An analysis of the scores found that both groups of Americans scored higher than the Chinese and that the engineers outperformed their TESL/TEFL counterparts of the same nationality. Reliability estimates were moderately high. ANOVA results confirmed that the test distinguished between engineers and non-engineers, as well as between native and non-native English speakers.

EAVES, RONALD C., & SIMPSON, ROBERT G. Statistically significant differences between subtest scores on the Test of Reading Comprehension. *Psychology in the Schools*, July 1986, *23*, 255-258.

Notes statistically significant differences between any two of the eight subtest scores of the *Test of Reading Comprehension*. A table is presented which may be used to identify statistically significant differences for grade levels two through seven.

MARTIN, MICHAEL O., & FORDE, PATRICK D. The Marino graded Word Reading Scale in the primary school—a study in Co. Meath. In *Proceedings of the Eighth Annual Conference of the Reading Association of Ireland*, 1983, 121-148.

Reviews the role of the *Marino Graded Word Reading Scale* in primary schools of Ireland to establish the need for possible revision and renorming of the scale. Data are then reported from an administration to a stratified sample of children in one school area, Co. Meath. Usable data were returned from 1,373 pupils. Percentages of children scoring correctly at the appropriate age range for each item were computed and compared with the percentages in the original standardization sample. Changes in item difficulty were found at many levels. Regression analyses suggested a need for a modification of the original scoring rules. Data suggested problems with the formula at certain ages, sugggesting the need for a normed score presented in terms of the reading age observed for a given percentile rank in the population. Two different but complementary norms tables were prepared from the Co. Meath data, age norms and grade or class norms, and are included, with the suggestion that they might supplement the modification to the original scoring rule for the original test.

POWERS, STEPHEN, & BARKAN, JERRY H. Concurrent validity of the standard progressive matrices for Hispanic and non-Hispanic seventh-grade students. *Psychology in the Schools*, October 1986, *23*, 333-336.

Examines correlation coefficients between the *Standard Progressive Matrices* (SPM) and the Reading, Language, and Mathematics tests of the *California Achievement Test* (CAT) battery, using 99 Hispanic and 93 Caucasian seventh graders. The mean for Hispanic pupils on CAT was lower than that of Caucasians in Reading and Language, but did not differ in Mathematics. SPM scores for Hispanics correlated .40 with CAT Reading, .45 with Language, and .49 with Mathematics. For Caucasians, coefficients of SPM scores were .51, .51, and .55, respectively, with the three CAT test scores.

PERKINS, KYLE. Measuring ESL readers' ability to apply reasoning in reading: A validity study of the TOEFL reading comprehension subtest. *Journal of Research in Reading*, February 1988, *11*, 36-49.

Conducts a validity study of the *Test of English as a Foreign Language* (TOEFL) to determine if it assesses reasoning and also studies an experimental instrument for the same purpose. Subjects were 40 advanced proficiency students enrolled in fulltime intensive English classes. Reliability of the TOEFL using the Kuder-Richardson 20 was .89 for Reading Comprehension and .95 for TOEFL total score. The Pearson product-moment correlation oefficient corrected for unreliability between the experimental test and TOEFL comprehension subtest was .64. Analysis of variance of the experimental test indicated that classification items were more difficult than serial items, multiplication items more difficult than addition items, and intension items more difficult than extension items. It is concluded that the validity of the TOEFL comprehension subtest as a measure of reading is questionable. The experimental measure was based upon a Piagetian model of reading comprehension.

Rosso, Martin, & Phelps, LeAdelle. Factor analysis of the Woodcock-Johnson with conduct disordered adolescents. *Psychology in the Schools*, April 1988, *25*, 105-110.

Reports a factor analysis of the *Woodcock-Johnson Tests of Cognitive Ability*. A sample of 286 adjudicated male adolescents were administered the Woodcock-Johnson as part of an educational and psychological evaluation. A principal factor analysis was performed with iteration to the most ideal solution. This analysis yielded three factors. Factor One was a verbal factor. The subtests of Picture Vocabulary and Antonyms-Synonyms loaded most highly on Factor One. Subtests that assessed abstract reasoning, such as Analogies, Antonyms-Synonyms, Visual Auditory Learning, and Concept Formation, loaded highest on Factor Two. Factor Three included subtests that dealt with numerical content such as Quantitative Concepts, Visual Matching, and Numbers Reversed. Subtests comprising the Perceptual Speed cluster did not create an identifiable factor. Caution was recommended in using the Cognitive Factor clusters recommended by the publisher.

V-13 Instructional time/summer instruction

Wheeler, Patricia. The relationship between grade six test scores and the length of the school day. *Educational Research Quarterly*, 1986-1987, *11*(3), 10-17.

Designs a study to research the relation between length of school day and school-level test performance in reading, writing, and mathematics. The school served as the unit of analysis. The sample for the study included 1,030 schools with about 75,000 grade six pupils in California. Variables included: California Assessment Program (CAP) scores for grade six in reading, writing, and mathematics; sixth-grade enrollment; socioeconomic status (SES); percentage of families in a school on Aid to Families with Dependent Children; percentage of children classified as limited- or non-English proficient (LEP); departmentalized or self-contained classrooms; length of school week (LW); and minutes per week allocated to 10 subject areas (MW). Based on weighted regression analyses, time in science was found to be consistently related to increased performance in all three skill areas and across SES subgroups with the exception of high SES schools. Time allocated to mathematics was associated with test performance in all three areas for low SES schools. LW was positive and significant for all groups except the middle SES group on the three skill measures. Relations between test scores and time allocation differed by SES group.

Heyns, Barbara. Schooling and cognitive development: Is there a season for learning? *Child Development*, October 1987, *58*, 1151-1160.

Reviews literature on the effects of summer programs with particular attention to recent research and to longitudinal studies. Research on summer learning tends to fall into two analytic approaches: (1) research concerned with program effectiveness and with the effects of summer school and compensatory education, and (2) research about rates of learning and the effects of schools in attempts to understand the patterning of learning between schooling and summer. Earlier research of summer learning tended to focus upon retention patterns rather than cognitive growth. However, samples were small and unrepresentative, controls were rarely present, and confounding factors were unmeasured. More recent studies have been more sensitive to patterns of cognitive development differing by class and race, and have focused on inequality in achievement outcomes. In general there is agreement that children learn at a slower rate during the summer than during the regular school year. Summer programs, it is felt, do not appear to enhance cognitive growth, although preliminary evidence suggests that intensive remediation can arrest decline. It is concluded that summer programs can be effective, especially for the disadvantaged.

V-14 Technology and reading instruction

Blanchard, Jay S.; Mason, George E.; & Daniel, Dan (Eds.). *Computer Applications in Reading.* Newark, DE: International Reading Association, 1987.

Includes a chapter reviewing computer based research in teaching reading, reading assessment, and psychological and physiological aspects of the reading process. An extensive annotated bibliography, chronologically arranged, follows the chapter.

Balajthy, Ernest. What does research on computer-based instruction have to say to the reading teacher? *Reading Research and Instruction*, Fall 1987, *27*, 54-65.

Addresses the question of the effectiveness of computer-based instruction by reviewing the research in that area. It is noted that before answering the question, it is important to ask about the kind of computer-based instruction, the other methods used, and to define effectiveness. Seven limitations of the research are addressed. It is concluded that the findings in this area are equivocal, but that supplementing classroom instruction with computer-based instruction is effective. The latter statement is true of any supplementary instruction, however.

Watkins, Marley W., & Abram, Sandra. Reading CAI with first grade students. *The Computing Teacher*, April 1985, *12*(7), 43-45.

Describes a study designed to test the effectiveness of microcomputer-based CAI drill and practice with first graders. Regular classroom instruction included a basal program and a mathematics series. Subjects were 47 girls and 56 boys in one suburban school. Pupils were pretested with the *Iowa Basic Skills* (ITBS) reading and math subtests and the *Cognitive Abilities Test*. Posttests included the ITBS reading subtest, the *California Achievement Test* (CAT) math computation subtest, and a school district criterion-referenced math computation test. Children were assigned randomly to either the CAI math or reading group. Pupils received beginning reading instruction for 45 minutes a week for 12 weeks via microcomputer assisted drill and practice. Educationally significant results were apparent on the reading subtest of the ITBS. Boys performed as well as or better than girls on the reading test.

Reitsma, Pieter. Reading practice for beginners: Effects of guided reading, reading-while-listening, and independent reading with computer-based speech feedback. *Reading Research Quarterly*, Spring 1988, *23*, 219-235.

Compares the effectiveness of three conditions of reading practice for Dutch beginning readers: guided-reading, read-along, and speech-select. Pupils had been exposed to formal reading instruction for eight months, had a mean CA of 7.2 years, and were 72 in number. Children were randomly assigned into the three conditions plus a control condition. Five short stories were written, using 20 target words just once in each story. Target words were two or three syllables in length and had between 9 and 15 letters. Stories were tape recorded in two versions: (1) for the read-along condition, texts were read naturally at a rate of 55 words per minute; (2) for the speech-select condition, stories were recorded with short periods of silence between each word. For the speech-select condition, text pages were attached to frames mounted on a pressure-sensitive tablet. Pressing on the tablet passed the location information to a microcomputer and the word would then be pronounced. Children attended seven sessions, a pre- and posttesting session and five for the reading practice. Pre- and posttests consisted of the list of target words printed in different order and to be read orally; changes in rate and accuracy were analyzed. Children in the guided reading and speech-select conditions improved significantly more in rate than did children in the reading-along and control conditions. No significant effects were found for reading accuracy.

Riding, R.J., & Weston, P. Type of feedback and young children's performance on computer presented reading readiness activities. *Educational Psychology*, 1987, *7*(4), 313-319.

Explores the effect of a feedback factor on performance of young children presented with reading readiness activities. Subjects were 40 children, ages 3-10 to 4-6, who were attending half-day nursery classes at two inner-city schools. Activities were presented on a microcomputer with two feedback conditions used: (1) a smiling bear face accompanied by a simple tune after every trial, and a sad bear face for an incorrect attempt; and (2) a smiling bear face and tune when correct, but nothing when incorrect. Children were randomly placed within sexes into four groups. Groups 1 and 2 listened to a story involving the bear character first and then did the activities under Condition 1 or 2. Groups 3 and 4 simply did the activities without the story but were in the feedback conditions. Children who received the story had a higher mean performance per activity than those who did not except in the case of boys with no feedback. Performance was superior with the story under feedback Condition 1.

Icabone, Dona G., & Hannaford, Alonzo E. A comparison of two methods of teaching unknown reading words to fourth graders: Microcomputer and tutor. *Educational Technology*, February 1986, *26*(2), 36-39.

Compares the efficacy of teaching unknown reading words by a microcomputer/synthesizer and a human tutor. Subjects were 32 fourth graders from a rural district, all of whom scored in the fifth stanine on a standardized reading test. Two interventions were initiated, with each subject serving as his/her own control. Half the group received the microcomputer/speech synthesizer first and the tutor second, while the other half received interventions in the reverse order. In the microcomputer intervention, pupils were asked to read a passage from the *Gray Oral Reading Test* and to type unknown words into the computer. The speech synthesizer then pronounced the word, and then displayed and pronounced all unknown words the child had typed. In addition, each unknown word was presented on the screen with two visually similar words, and the stimulus word verbalized. A similar procedure was followed immediately with the tutor intervention. Recall of words was checked at the end of each phase. The two interventions appeared equally effective both in recognition of previously unknown words and in their recall.

Blair, Susan M. Computer use in an elementary school: A case study. *Journal of Reading Education*, Winter 1987-88, *13*(2), 48-55.

Presents a case study conducted in one elementary school in an effort to reveal teachers' understanding and experience with computing. Interviews were conducted with teachers who had direct access to a computer. Most of their training had been trial and error. One computer lab teacher reported organizing a year-long plan for computer instruction at her grade level. However, she indicated that there was no coordination with other schools or other grade levels. Some pupils have access to computers through a gifted/talented class or in a Chapter 1 class. District coordinators identified a need for a computer literacy curriculum or other unifying mechanism.

Bass, George; Ries, Roger; & Sharpe, William. Teaching basic skills through microcomputer assisted instruction. *Journal of Educational Computing Research*, 1986, 2(2), 207-219.

Assesses the effectiveness of computer assisted instruction (CAI) with low achieving pupils in grades 4, 5, and 6. Pre- and posttest data were collected using the *SRA Achievement Series* in reading and mathematics, the *Virginia Basic Learning Skills Testing Program* (BLS) in reading and mathematics, and the *School Attitude Measure* (SAM). Intact Chapter 1 classes made up both the treatment and control groups. In reading, there were 119 experimental pupils and 72 controls (grades 5 and 6 only). In mathematics, the numbers of pupils totaled 141 experimentals and 87 controls. Microcomputer time over the 30 weeks of CAI instruction in reading averaged 9.68 hours at grade four, 12.64 hours at grade five, and 14.89 hours at grade six; for math, the means were 10.19, 10.85, and 8.72 hours, respectively, at grades 4, 5, and 6. At grade four, the CAI groups showed statistically significant gains on both the SRA and BLS. When comparisons were made at grades 5 and 6 between CAI and control groups, it was found that sixth grade controls performed better on the SRA mathematics than did the CAI pupils, while CAI pupils performed significantly better at the sixth grade on SRA reading than did controls. SAM scores showed no significant differences at any grade level.

Anzalone, Stephen. High technology, literacy, and Lesotho. In Daniel A. Wagner (Ed.) *The Future of Literacy in a Changing World. Elmsford, NY: Pergamon Press, 1987, 276-288.*

Describes and gives results of a 12-week program in Lesotho in which electronic learning aids were used in reading and math instruction. Five schools participated. children using the arithmetic aid were 11-13 years old; those using the reading aid were 8-10 years old. Pupils used the aid in groups of four for one hour daily. Four classes used the reading aid: one class for 12 weeks, one for 8 weeks, and two for 4 weeks. One class used the math aid for 12 weeks and one for 8 weeks. Pupils using the reading aid and a control group were given a weekly 50-item English word recognition text; half of the words were instructed by the aid and half were not. The data suggested a positive effect on achievement in word recognition and in math with the learning aids.

Norton, Priscilla, & Resta, Virginia. Investigating the impact of computer instruction on elementary students' reading achievement. *Educational Technology*, March 1986, 26(3), 35-41.

Researches and compares the impact of three categories of computer-based instruction on elementary school children's reading test scores: integrated learning systems, problem-solving software, and simulation software. Children were enrolled in computer reading classes during a six-week summer session. Participants were entering grades 3 to 6 in the fall; 87% had participated in a federally funded program of supplemental instruction for low achievers. Each class was assigned to one of three groups: skills (n = 26), problem-solving (n = 42), and simulation (n = 34). Pre- and posttest measures were the vocabulary and comprehension subtests of the *Gates-Mac-Ginitie Reading Tests*, and the *Purdue Elementary Problem-Solving Inventory*. Total instruction time was 25 hours for each group. For third graders, ANCOVA results indicated no differences among groups on any of the measures. For children entering grades 4, 5, and 6, the problem-solving and simulation classes showed greater gains than did the skills classes.

Gadzella, Bernadette M. Research brief: Study skills presented through computer-assisted instruction to high school students. *Texas Tech Journal of Education*, Winter 1985, 12(1), 47-50.

Reports two studies in which computer-assisted instruction (CAI) in study skills was employed with high school students. The *CAI Study Skills Modules* (SSM) were used. Subjects in the initial study numbered 56 and were enrolled in two advanced senior high school English classes, randomly assigned to experimental and control classes, both taught by the same teacher. Of 50 who completed the four-month program, 23 were in an experimental segment, and 27 acted as controls. All students were pre- and posttested on the *CAI Study Skills Test* (SST). Data were analyzed using analysis of covariance, and results indicated that the experimental group scored significantly higher (p .05) than did the controls on total test scores and on Memory Improvement and Interpersonal Relations scales. Subjects in a second study were 57 enrollees in two computer mathematics and one algebra class, all taught by the same instructor. In this instance, 28 males and 26 females completed the program. All involved took the SST and the *Tennessee Self-Concept Scale* (TCSC) as pre- and posttests. Group I members completed the SSM. After data collection, subjects in Group II completed the SSM. Then all responded to the SST and the *Scale*. Data were analyzed using the t test and product-moment correlation coefficients. The total group gained significantly from the SSM and indicated a greater self-satisfaction on the TSCS after completing the modules. Results showed that (a) Group I gained significantly more on the study skills when compared with Group II before this latter segment had completed their modules; (b) seniors gained significantly more than did juniors; and (c) high achievers gained significantly more than did low achievers. GPAs were significantly related to the total study-skills test and to eight of the skills, but not with total self-concept. There was a significant correlation with the Moral-Ethical sucscale on the TSCS.

Carrier, Stuart Ives. Microcomputer programmed remediation of specific reading and writing skills deficiencies in secondary school students. *Educational Technology*, March 1988, 28(3), 40-42.

Studies the effectiveness of microcomputer-administered remediation. A sample of 130 high school students who had failed Florida's *State Student Assessment Test* were assigned to one of four treatments: (1) printed exercises; (2) microcomputer exercises with neutral reinforcment; (3) microcomputer exercises with graphic reinforcement; and (4) microcomputer exercises with verbal reinforcement. Project-developed pre- and posttests which measured one writing skill (use of the singular possessive) and one reading skill (distinguishing fact and inference) were administered. Significant treatment effects were found for writing but not for reading. Data also suggested that any form of reinforcement was better than none.

Harper, Janice A., & Ewing, Norma J. A comparison of the effectiveness of microcomputer and workbook instruction on reading comprehension performance of high incidence handicapped children. *Educational Technology*, May 1986, 26(5), 40-45.

Compares the effectiveness of microcomputer and textbook instruction on silent reading comprehension performance of handicapped children. Nine special education subjects assigned to a junior high school resource room constituted the population. These pupils were classified as learning disabled and mildly mentally handicapped. Total performance IQ score range of the WISC-R was 72-109. Reading comprehension scores were obtained from end of school year results on the *Comprehensive Test of Basic Skills*, and an informal reading inventory. These scores were used for determining grade level placement in the computer and workbook instruction. Procedures were divided into three phases: the first involved collecting baseline data on paper-and-pencil activities. The instruction phase spanned four sessions weekly and involved alternating microcomputer and workbook instruction for 20 minutes each session. The third phase involved follow-up in which only the most effective treatment was implemented. This last phase was conducted eight weeks after completion of phases one and two and involved 20 minute daily sessions for one week. Findings derived from analysis of performances indicated that for all but one of the nine subjects, the microcomputer was the most effective in terms of number of comprehension questions answered correctly.

Schloss, Patrick J.; Schloss, Cynthia N.; & Cartwright, G. Phillip. Questions and highlights in CAI modules. *The Computing Teacher*, March 1985, 12, 14-15.

Seeks to determine the relative impact of questions and highlights on achievement and pupil satisfaction in three studies using computer assisted instruction (CAI). Text-based CAI modules were employed throughout. The initial study involved eight groups of 18 pupils each. The second study used 10 groups of 9 pupils each, and the final study used 4 groups with 12 pupils each. The CAI module used with each group differed only in the ratio of questions or highlights located on the screens of text. In the first study, the first group had one question after each screen of text; the second, one question after every three screens; the third, one question after every five screens, while the fourth had no questions but only straight textual material. The same four ratios applied to groups five through eight except that highlights replaced questions in the modules. In general, it was found that questions and highlights were superior to straight text treatment. The location of the question or highlight did not appear to be a significant variable. Questions appeared to be effective only in enhancing children's mastery of concepts specifically targeted by such questions. Subjects preferred to have highlights over questions.

GLENN, CRAIG. Rusults of using CAI to improve performance in basic skills areas. *T.H.E. Journal, June 1988, 15(10), 61-64.*

Reports changes in *Stanford Achievement Test* (SAT) scores as a result of using computer assisted instruction (CAI). CAI was used for 25 minutes daily by pupils in grades 4, 5, and 6. After five months children were retested on the SAT and scores obtained in Total Language, Reading Comprehension, Science Reading, Total Math, and Total Listening. Large gains were found in reading comprehension. Attitude surveys administered to both children and teachers indicated positive feelings toward CAI.

WILLING, KATHLENE R. Computer simulations: Activating content reading. *Journal of Reading*, February 1988, 31, 400-409.

Reports field tests of educational software produced for students in Ontario, Canada, schools. Four historical simulations covered Canadian history from the Loyalist period to the settling of the Plains. students, working in small groups, read computer-based test and made decisions, recreating the experiences of several generations of a family. As they made choices, the programs branched to various outcomes that were appropriate for the context of the historical event. Findings are reported for over 200 students in nine schools, with students representing a wide variety of ethnic backgrounds and reading levels. Subjects came from grades 7, 8, and 10. Two evaluators spent an hour a day for three days observing and interviewing students using the software, and audiotaping responses. Observations demonstrated active use of reading processes to handle the simulation tasks. Student comments also demonstrated the teamwork involved in working through the computer simulation exercises.

V-15 Characteristics of effective comprehension instruction

CARVER, RONALD P. Should reading comprehension skills be taught? In John E. Readence & R. Scott Baldwin (Eds.) *Research in Literacy: Merging Perspectives.* Thirty-sixth Yearbook of The National Reading Conference, 1987, 115-126.

Reviews articles and relevant research on the impact of spending more time teaching reading comprehension skills. Argues that the evidence is exceptionally weak at best and that three principles can be used to explain why experimental groups outscore control groups in many reports: (1) the Easiness Principle, (2) the Reading Time Principle, and (3) the Practice Principle. The first two principles are often not accounted for in research. Further, it is felt that there is little support that suggests gains due to the Practice Principle transfer to general reading ability.

Cunningham, James W., & Moore, David W. The confused world of main idea. In James F. Baumann (Ed.) *Teaching Main Idea comprehension*. Newark, DE: International Reading Association, 1986, 1-17.

Presents operational definitions and examples for nine separate main idea tasks in order to clarify confusion over the term main idea in the research and comprehension instruction literature. Responses of sixth graders, preservice teachers, and inservice teachers to a task requiring them to decide the main idea of a text were evaluated using the operational definitions. While the main idea task of topic was produced most frequently, other types were produced as well. Individuals tended to be consistent in the type of response they used when directed to get the main idea.

Alvermann, Donna E. Comprehension/thinking skills. In Donna E. Alvermann, David W. Moore, & Mark W. Conley (Eds.) *Research Within Reach: Secondary School Reading*. Newark, DE: International Reading Association, 1987, 52-63.

Reviews and synthesizes research dealing with the elements of effective learning as they relate to increasing learners' comprehension of text. The review is organized under three major topics: strategies for focusing attention, elaborating and organizing strategies, and knowing when and how to apply strategies. Strategies identified for focusing attention include using analogies, oral previews, thematic organizers, and structured overviews. Two major strategies for aiding learners in committing information to long term memory are elaboration and organization. Modeling and direct instruction are discussed as ways of helping learners know when and how to apply strategies.

Aulls, Mark W. Actively teaching main idea skills. In James F. Baumann (Ed.) *Teaching Main Idea Comprehension*. Newark, DE: International Reading Association, 1986, 96-132.

Focuses on instructional issues related to main idea comprehension. Issues are discussed and research is cited to demonstrate the need for main idea instruction.

Johnson, Kathleen L. Improving reading comprehension through pre-reading and post-reading exercises. *Reading Improvement*, Summer 1987, *24*, 81-83.

Cites selected literature on improving reading comprehension through building background information preceding a lesson and following with discussion. The literature supports the use of questions both within and adjacent to a reading passage as well as the encouraging of self-formulated questions by children.

Pearson, P. David, & Dole, Janice A. Explicit comprehension instruction: A review of research and a new conceptualization of instruction. *Elementary School Journal*, November 1987, *88*, 151-165.

Synthesizes recent research on comprehension instruction and presents a new conceptualization of instruction based on the research. A brief historical perspective on comprehension skill instruction is given, followed by a review of selected research on holistic comprehension. The review focuses on studies of inference training, reciprocal teaching, and explicit comprehension instruction. Questions about explicit instruction and curriculum concerns are raised.

Baumann, James F. The direct instruction of main idea comprehension ability. In James F. Baumann (Ed.) *Teaching Main Idea Comprehension*. Newark, DE: International Reading Association, 1986, 133-178.

Draws on selected studies to define direct instruction in terms of specific behaviors or goals that consistently relate to student gains in reading: clearly formulated and articulated purposes and objectives; adequate allocations of instructional time; effective use of academic engaged time; task oriented academic focus; teacher directed instruction; teacher monitoring of learner achievement; high success rates for students; effective management of instruction; appropriate use of grouping; and warm, cooperative classroom environments. A five-step direct instruction strategy for teaching main idea comprehension is included, and research evidence is cited to demonstrate the strategy's effectiveness.

V-16 History of reading instruction

ROSER, NANCY L. Teaching and testing reading comprehension: An historical perspective on instructional research and practices. In James Flood (Ed.) *Promoting Reading Comprehension*. Newark, DE: International Reading Association, 1984, 48-60.

Traces the teaching of reading comprehension and the measurement of reading comprehension from 1915 to the present. Suggests that while knowledge of reading comprehension has not changed significantly from earlier times, awareness of issues within reading comprehension, and awareness of instructional procedures have changed.

VI. Reading of atypical learners

VI-1 Visually impaired

PRING, L. Orthographic effects of braille and print in the auditory modality. *Journal of Visual Impairment & Blindness*, December 1986, *80*, 993-998.

Carries out three experiments exploring the influence of orthographic codes in the comprehension by blind and sighted subjects of words presented auditorially. Subjects were 12 congenitally blind females, ages 17-19, amd 12 first-year undergraduates at the University of London in Experiment 1; in Experiment 2, 11 of the subjects from the first experiment participated and 11 sighted readers, ages 19-35. Subjects for Experiment 3 are not identified. In Experiment 1, two audiotapes were prepared. The task was to detect a target word which rhymed with a previously given cue word, and to press a reaction-time key when it was heard. Rhyme pairs which shared similar orthographic codes were detected by both groups faster than were rhyming pairs which did not share similar orthographic codes. Experiments 2 and 3 compared the two groups on their speed in detecting letters presented auditorially in letter-number pairs. Results indicated that a braille-derived orthographic code, as well as a print-derived code, affects auditory word processing.

MILLER, SUSANNA. The perceptual "window" in two-handed braille: Do the left and right hands process text simultaneously? *Cortex*, March 1987, *23*, 111-122.

Tests the hypothesis that fluent readers of braille use both hands to read simultaneously. Ten students from a British high school for the blind served as subjects. Students were in the top 15% of their school population. Criteria for selection were speed and two-handed reading. Subjects read two short warm-up stories and an assigned story aloud as their hand movements were filmed using a special recording device. A frame-by-frame analysis was then used to obtain data on finger location and time. Only normal reading when both hands touched the text simultaneously was counted. Six different simultaneous finger positions were identified, and frequencies of each type were calculated as a proportion of their total frequency for each student. Most frequently, when one finger touched a letter, the other simultaneously touched a space between letters or between words. The latter two positions were significantly more frequent than simultaneously touching two letters, or two spaces between letters, or gaps between words. Simultaneously touching a letter and a space between letters was also more frequent than simultaneously touching a space between letters and a gap between words. Thus results contradicted the idea that fluent braillists read different portions of prose texts simultaneously with the two hands. It was also found that both the right and left hands were used for spatial as well as for verbal aspects of the task. It is felt that the evidence suggests that fluent braille reading depends to a large extent on fast intermittent alternation in function between the two hands.

Wilkinson, Jean M., & Carr, Thomas H. Strategic hand use preferences and hemispheric specialization in tactual reading: Impact of the demands of perceptual encoding. *Brain and Language*, September 1987, *32*, 97-123.

Administers four reading-related, information-processing tasks to 63 totally blind right-handed readers of braille. Subjects differed in level of reading skill and in preference for using the right hand or the left hand when required to read text with one hand only. Level of reading skill was assessed by the grade-equivalent score on the *Slosson Oral Reading Test* (SORT). The required tasks involved letter identification, same-different matching of letters that differed in tactual similarity, short-term memory for lists of words that varied in tactual and phonological similarity, and paragraph reading with and without a concurrent memory load of digits. Results showed interactions between hand preference and the hand that was actually used to read the stimulus materials, such that left preferrers were significantly faster and more accurate with their left hands than with their rights, whereas right preferrers were slightly but usually not significantly faster with their right hands than with their left. The findings are interpreted as suggesting that encoding strategies for dealing with braille are reflected in hand preference and that such strategies operate to modify an underlying but somewhat plastic superiority of the right hemisphere for dealing with the perceptual requirements of tactual reading. These requirements are not the same as those of visual reading, leading to some differences in patterns of hemispheric specialization between readers of braille and readers of print.

Hartley, J.; Tobin, M.J.; & Trueman, M. The effects of providing headings in braille text. *Journal of Visual Impairment and Blindness*, May 1987, *81*, 213-214.

Investigates the effects of inserting headings into braille text on comprehension of 24 blind readers. Two texts, each about 40 lines in length, were printed in braille in two versions, one with and one without headings. Short-answer recall tests followed each passage. Participants each read two passages, one with and one without headings, and were asked to comment on the usefulness of the headings. The headings did not significantly affect recall, but participants generally were favorably disposed toward headings.

Tokuda, Katsumi, & Seo, Masao. Adapting the English Blind Learning Aptitude Test (BLAT) for administration to blind Japanese children. *The Science of Reading*, July 1987, *31*, 66-71.

Investigates factors affecting speech of reading braille by 96 blind students, grades 10-15. Factors investigated included visual acuity, chronological age, duration of braille learning, age at which visual impairment took place, age at onset of braille learning, and ability to recognize braille letters. The *Braille Reading Speed Test* was administered. Speed of braille reading was closely related to duration of learning braille. No relation was found between speed of braille reading and visual acuity, age at onset of visual impairment, or age at which braille learning began.

Bruteig, J.M. The reading rates for contracted and uncontracted braille of blind Norwegian adults. *Journal of Visual Impairment and Blindness*, January 1987, *81*, 19-23.

Identifies 35 late-blind Norwegian adults, aged 20-70, and compares their reading of equivalent texts and single words in contracted and uncontracted braille. For continuous text, reading rate was assessed and for single words, rate of identification was assessed. Two simple narrative texts of about 360 words were each divided into two equal segments and written in uncontracted braille, in ordinary contracted braille, and in a less-contracted version that contained only the 37 contractions expressed by a single character in standard Norwegian contracted braille. In a first session, subjects read the first half of a text in contracted braille, and, after a brief pause, the second half in uncontracted braille. In a second session, subjects read half of the other text in uncontracted braille and half in the less-contracted version. Texts were read twice. At intervals of about 25 words, two short words were inserted into the text, one fitting the context and one not fitting it. As a measure of comprehension, subjects were to read the correct word aloud. For word identification, subjects read 28 single character contractions representing high frequency words and then the uncontracted versions. Six subjects did not complete the continuous text reading in either format. While reading rates increased when reading contracted versions of both continuous text and single words, rates were higher with the contracted single words. Slow readers saved more time than fast readers did when reading texts in which contractions were used frequently.

TROBE, JONATHAN R., & BAUER, RUSSELL M. Seeing but not recognizing. *Survey of Ophthalmology*, March/April 1986, *30*, 328-336.

Cites three cases of patients who were able to pass routine ophthalmological tests but still had disabling visual deficits. One patient had alexia without agraphia; the second, prosopagnosia; the third, simultanagnosia. The routine examination in such cases needs to be supplemented with various simple screening maneuvers, including reading a newspaper paragraph to detect most alexics.

THURLOW, WILLARD R. Some comparisons of characteristics of alphabetic codes for the deaf-blind. *Human Factors*, April 1986, *28*, 175-186.

Describes briefly 11 experiments comparing several alphabet codes for the deaf-blind with respect to tactual discriminability and ease of code learning. Subjects were adults with normal hearing and vision. Among raised-print codes, Braille was found to be difficult both to learn and to discriminate tactually. The Moon code was found to be significantly less difficult than Braille. Increasing the size of Braille and Moon codes increased accuracy of perception. A superiority of a vertical over a horizontal scanning procedure was found for the larger Braille symbols but not for the larger Moon symbols. Among hand-sent codes for person-to-person communication, hand-printed letters in the palm were well discriminated. For individuals without extensive previous experience with visual letters or for those having difficulty in integrating the information in more complex tactual symbols, T-code, a simple tactual finger code, is easily learned.

SOWELL, V., & SLEDGE, A. Miscue analysis of braille readers. *Journal of Visual Impairement & Blindness*, December 1986, *80*, 989-992.

Conducts a comparison of the reading miscues of braille and print readers. Scores on the *Miscue Analysis Inventory* were collected for 22 braille readers in public and residential elementary school programs. These data were then compared to existing data on sighted readers in terms of both type and frequency of miscues, means, standard deviations, ranges, and percentages. Braille readers were found to be similar to print readers in: (1) proportions of errors (substitutions, omissions, insertions in descending order of frequency), (2) reversals across words were not observed, and (3) miscues had a higher graphic than sound similarity. Unlike sighted readers for whom 75%-90% of corrections are successful, less than 40% of corrections made by braille readers were successful.

Legge, G.E.; Rubin, G.S.; Pelli, D.G.; Schleske, M.M.; Luebker, A.; & Ross, J.A. Understanding low vision reading. *Journal of Visual Impairment and Blindness*, February 1988, *82*, 54-59.

Reviews major findings of studies by the author concerned with visual factors that influence normal and low vision reading. The primary measure of performance used was reading speed with comprehension an alternative measure. Presence or absence of central vision aids in predicting reading performance. The visual requirements of reading were found to be modest and within the capacity of most low vision subjects.

Baldasare, John; Watson, Gale R.; Whittaker, Stephen G.; & Miller-Shaffer, Helen. The development and evaluation of a reading test for low vision individuals with macular loss. *Journal of Visual Impairement & Blindness*, June 1986, *80*, 785-789.

Presents a description of the *Pepper Visual Skills for Reading Test* (VSRT), a test designed to assess the visual components of the reading process for low vision individuals, particularly individuals with macular degeneration, and reports studies designed to evaluate the test's reliability. Forty-eight individuals with macular degeneration were tested individually. Subjects were presented with one of the three forms of the VSRT, and were timed while reading. Errors were recorded. A second form was given after a rest period of 20 minutes. Coefficient of correlation of percentages correct between the two test forms was high and significant (.90, $p < .01$), as was test-retest coefficient on accuracy scores for those performing below the median score (.82, $p < .01$). Coefficients of rate scores for the two instruments were also significant (.97, $p < .01$). Distributions of the relation between rate and accuracy suggest a curvilinear relation of three categories of readers: readers who are inaccurate and slow, readers who are accurate but slow, and readers who are quick and accurate. Rates decreased as successive lines of text were encountered. The authors recommend the use of the VSRT as a research and rehabilitation assessment instrument.

VI-2 Hearing impaired

Andrews, Jean F., & Mason, Jana M. How do deaf children learn about prereading? *American Annals of the Deaf*, July 1986, *131*, 210-217.

Traces the early reading behaviors of 45 deaf children over the course of a school year. Children ranged in age between five and eight years old and were from state residential schools for the deaf. A group of 23 from a school in the Southeast received the model-based experimental instruction; the other 22 were from two schools in the Northeast and received conventional reading instruction. In September and May, children were administered a test battery consisting of a set of the following prereading tasks: (1) fingerspelling first name, a letter, and a word; (2) identifying 26 letters with fingerspelled handshape; (3) printing a name, letter, and word; (4) reciting a story signed by the experimenter; and (5) recognizing 150 common words. In addition, parent interviews were conducted in September and May. Training was conducted for 30 minutes each week for nine months with each session including modeling, discussion, guided reading, and supervised practice. Experimentals outperformed controls on all tests except the printing and alphabet knowledge tasks. Using multiple regression techniques, it was found that age and race each accounted for 13% of the variance in early reading at pretest time. Age accounted for 25% of the posttest score variance. Parents of experimental children noted greater changes in letter knowledge and printing than did parents of controls. A three-level prereading model based on these results is presented.

Andrews, Jean F. Deaf children's acquisition of prereading skills using the reciprocal teaching procedure. *Exceptional Children*, January 1988, *54*, 349-355.

Assesses the effectiveness of the reciprocal teaching procedure used with 23 prelingually deaf kindergarten and first-grade pupils with severe-to-profound and profound hearing losses. Children ranged in age from 5 to 8 years and attended a full-time program in a state residential school. A control group of 22 prelingually deaf children from two other residential schools was tested also. Control Group 1 received traditional reading instruction similar to that received by experimentals except that it was unit based. Control Group 2 received traditional reading instruction with an emphasis on language experience. Experimental intervention was based on a modeling procedure and took place for 30 minutes once a week for nine months. Experimentals were coached on finger spelling, book reading, story retrelling, and word recognition. In addition to pre- and posttests of finger spelling, book reading, and book retelling, the effects of training were assessed by three groups of 50 words each: (1) drilled words which were rigorously taught, (2) untaught words not presented and not in the materials, and (3) exposed only words which appeared in the materials but were not taught. Training materials consisted of 20 experimenter-made simple storybooks and 50 drill cards. Experimentals outperformed controls on all posttest tasks.

HANSON, VICKI L. Access to spoken language and the acquisition of orthographic structure: Evidence from deaf readers. *Quarterly Journal of experimental Psychology*, May 1986, *38A*, 193-212.

Investigates deaf students' sensitivity to two types of orthographic structure: linguistically based orthographic regularity and summed single letter positional frequency. Subjects were two groups of prelingually, profoundly deaf college students and a control group of 17 hearing undergraduates. The two deaf subject groups consisted of 11 who were designated as a good-speech group on the basis of speech intelligibility ratings and 12 who were termed the poor-speech group. Experimental stimuli consisted of four types of six-letter nonsense word stimuli: strings high in summed single letter positional frequency that were orthographically regular or irregular, and strings low in summed positional frequency that were regular or irregular. There were 40 words of each type; the same stimuli were used in both the perceptual and the judgment task. The probe task called for subjects to indicate whether or not a target letter had been present in the letter string which had been presented. In the judgment task, subjects made judgements about how word-like various letter strings were. For the probe task, results indicated that the accuracy of subjects with good speech and of hearing subjects was greater for orthographically regular than irregular strings, but the accuracy of poor-speech subjects was much less related to orthographic regularity. The judgments of hearing subjects on the second task were more influenced by regularity than those of subjects with poor speech. Findings are discussed in terms of how expertise in speech relates to appreciation of orthographic regularity.

KAMPFE, CHARLENE M., & TURECHECK, ARMIN G. Reading achievement of prelingually deaf students and its relationship to parental method of communication: A review of the literature. *American Annals of the Deaf*, March 1987, *132*, 11-15.

Reviews research on the relation between parental method of communication and the reading achievement of deaf children. The evidence substantiates that deaf children of hearing impaired parents tend to function at higher levels of reading achievement than do deaf children of hearing parents. However, the literature is inconclusive regarding the relation between method of communication used with deaf children and their later reading achievement. Little research has been conducted on the relation between deaf children's reading achievement and the method of communication used by their hearing parents. In addion, many variables need examination, such as the age of the child when the parent begins to sign, degree of signing skill of parent, type of manual method used, and father's method of communication.

YURKOWSKI, PETER, & EWOLDT, CAROLYN. A case for the semantic processing of the deaf reader. *American Annals of the Deaf*, July 1986, *131*, 243-247.

Asks a proficient 17-year-old deaf reader to read two stories, one having greater syntactic complexity than the other, to determine if a deaf individual can process print at a semantic level. The two stories had the same plot structure and content, with one being more complex on average T-unit length, average clause length, length of passage, type-token ratio for nouns, and type-token ratio for verbs. The subject's signed retellings of the two stories were videotaped and transcribed. Transcriptions were then analyzed using a modified miscue analysis, with particular attention paid to graphic similarity, syntactic acceptability, and semantic acceptability. Results suggested that the subject was able to process the more complex story through the strategies of bypassing syntax and emphasizing the semantic cueing system, and of allowing the semantic cueing system to guide her parsing of the grammar. The simpler story, which was read first, provided background knowledge which permitted the subject to meet and overcome the complexity of the second story.

Plaut, Aviva, & Dromi, Esther. Text evaluation by teachers of school-aged hearing-impaired children. *Volta Review*, February/March 1988, *90*, 85-93.

Explores and compares how teachers of normal-hearing and of hearing-impaired children judge text complexity for their pupils. Subjects were 40 Israeli teachers, 20 of each type of child. Included in each group were 10 third grade and 10 sixth grade teachers. Five versions of a narrative text from a sixth grade text were prepared, differing only in complexity of linguistic structure. Teachers were to rate the stories under two experimental conditions: Condition A, from simple to complex as to linguistic complexity on a five-point scale; and Condition B, to select a version considered appropriate for their own class and to rate the versions from simplest to most difficult according to the relative difficulty for their pupils. For condition A, the overall difference in the ratings by the two groups was not statistically significant. However, teachers of hearing-impaired children selected a more limited range of texts when the task was to select materials for their own pupils.

Davis, Julia M.; Elfenbein, Jill; Schum, Robert; & Bentler, Ruth A. Effects of mild and moderate hearing impairments on language, educational, and psychosocial behavior of children. *Journal of Speech and Hearing Disorders*, February 1986, *51*, 53-62.

Does an evaluation of the speech, hearing, language, academic status, reasoning, intelligence, and personality of 40 children to note the effects of degree of hearing impairment on these factors. The children ranged in age from 5 to 18 years, were of normal intelligence, and had long-standing sensorineural hearing losses that were present at or shortly after birth. For purposes of analysis, children were divided into three hearing loss groups; these were then divided into two age groups: younger than 12, and 12 and older. Academic achievement measures administered included the Reading Comprehension subtest of the *Peabody Individual Achievement Test*, a sentence comprehension task, and the Mathematics test of the *Woodcock-Johnson Psycho-Educational Battery (WJPEB). Administered in additon were the WISC-R, the Missouri Children's Picture Series*, the *Child Behavior Checklist*, the Verbal Ability Cluster and the Reasoning Cluster of the WJPEB, the *Peabody Picture Vocabulary Test*-Revised (PPVT-R), the *Fisher-Logemann Test of Articulation Competence*, the Grammatical Completion subtest of the *Test of Language Development*, two language samples, and various audiological measures. There were no significant differences among age or hearing loss subgroups for WISC-R scores, PPVT-R, or WJPEB Reasoning or Verbal Ability scores. Only marginally significant differences were found for reading ($p < .05$) and math ($p = .10$) scores. It was concluded that even minimal hearing loss placed children at risk for language and learning problems.

Koskinen, Patricia S.; Wilson, Robert M.; & Jensema, Carl J. Using closed-captioned television in the teaching of reading to deaf students. *American Annals of the Deaf*, March 1986, *131*, 43-46.

Explores the effect of closed-captioned TV on students' sight vocabulary and reading comprehension. Participants included 41 students, aged 13-15, who were severely or profoundly deaf and their eight teachers. Teachers were given two 1/2 hour training sessions on how to use captioned TV lessons and two follow-up sessions after beginning to use it. Baseline data were collected during 3 or 4 regular reading lessons, followed by data collected during 6 to 8 closed-captioned TV reading lessons, then again during 2 regular instructional lessons, and finally during 2 closed-captioned TV lessons again. Nine subjects who scored poorly on sight vocabulary retention during baseline data collection served as subjects of single-case experiments. Numbers of words introduced and retained in each lesson were recorded. About 10% more words were retained in the closed-captioned sessions than in the regular sessions. Teachers rated children's comprehension and interest better under the experimental condition.

NEGIN, GARY A. The effects of syntactic segmentation on the reading comprehension of hearing impaired students. *Reading Psychology*, January-March 1987, *8*, 23-31.

Asks whether syntactic segmentation would aid the reading comprehension of hearing impaired students. The 20 subjects involved were from special classes for the hearing impaired which utilized a total communication approach. A segmented and a standard version of a narrative passage and an expository passage were developed. Passages were written at a second grade readability level as students were identified by teachers as reading at a second grade instructional level. Eight literal and two inferential questions were used to assess comprehension of each passage. Subjects were randomly assigned to a group that read segmented passages or to a group that read the standard passages. Analysis of variance indicated that segmentation significantly aided the reading comprehension of the hearing impaired. Comprehension socres for both passages were comparable.

EXLEY, SANDRA, & ARNOLD, PAUL. Partially hearing and hearing children's speaking, writing and comprehension of sentences. *Journal of Communication Disorders*, October 1987, *20*, 403-411.

Compares partially hearing, deaf, and hearing children's ability to say, write, and comprehend sentences from the Sentence Comprehension Test (SCT). Subjects were 16 partially hearing children (mean age of 9.58 years), 10 younger hearing children (mean age of 7.4), and a control group of 20 older profoundly deaf children (mean age of 12.95). The SCT was used in a modified way to elicit a spoken and a written sentence from each child and then as a reading test. Partially hearing children made more errors in both the spoken and written conditions than the younger normal hearing children. In the writing condition, the partially hearing performed better than the profounding deaf. In the reading comprehension condition, the three groups performed equally well. On a spelling test of 10 items, the partially deaf emerged as an intermediate group and made an equal number of errors judged to be visual or phonetic, in contrast to the hearing group whose errors were primarily phonetic and the deaf group whose errors were primarily visual.

LASASSO, CAROL, & SAVVIDES, GEORGE. Visual matching test-taking strategies of hearing impaired students in Greece and Cyprus. *Teaching English to Deaf and Second Language Students*, Winter 1985, *3*(3), 16-20.

Undertakes a study to determine if visual matching test-taking strategies are used by hearing-impaired students in non-English speaking countries. Subjects were 33 prelingually, profoundly deaf subjects from two residential schools in Greece and Cyprus, ages 14 to 20. All subjects were identified by their teachers as reading at a fourth grade level. Subjects were asked to read three short passages and to answer two text-explicit and two text-implicit questions on each. Incorrect responses were analyzed to note whether they included verbatim language from the text, thereby suggesting usage of visual matching test-taking strategies.

Such responses were then classified into one of nine categories. Of 396 responses, 65% were incorrect. Of these incorrect responses, 92% consisted of language used verbatim in the text and 207 of these responses were in physical proximity to key words, thus suggesting the use of visual matching. Slightly over half of the subjects used visual matching more than 50% of the time; 18% of subjects used visual matching more than 75% of the time.

Braden, Jeffery P. Reading habits and preferences of deaf students beginning postsecondary programs. *American Annals of the Deaf*, July 1986, *131*, 253-256.

Utilizes a questionnaire to identify reading habits and preferences of 441 deaf students. The 441 participants came from six postsecondary programs. The median number of books read per year was 10; of magazines per month, 4.1; and of newspapers read per week, 6.4. Books were obtained primarily through purchases at a store (44.5%) or at school (7.7%); 29.8% borrowed books from the library. A total of 82% indicated that they read a book and saw a movie of the same title at least once. Sex differences were found for book topics and magazine titles. Males read newspapers more often than females. The type of secondary school attended was related to quantity of materials read, with graduates of signing programs reading significantly fewer books but more magazines than "no special program" graduates. Individuals with more residual hearing indicated a slight tendency to read books at higher reading levels.

Reynolds, H.N. Performance of deaf college students on a criterion-referenced, modified cloze test of reading comprehension. *American Annals of the Deaf*, December 1986, *131*, 361-364.

Examines the performance of 100 hearing-impaired college students on the *Degrees of Reading Power* (DRP) test. Raw scores on the DRP were converted to DRP readability scores at the 75% comprehension level. A bimodal distribution of DRP scores was found and compared with the prose difficulty for various kinds and levels of reading materials. Also calculated were Pearson r coefficients between DRP scores and scores on the *Cooperative Reading Comprehension Test (r = .69) and on the Gallaudet Reading Test* (r = .62). DRP scores were significantly correlated with degree of hearing loss for prelingually deaf students (r = -.26) and with articulation ability (r = .54), but showed no significant correlation with speechreading ability (r = .19) or sign communication experience.

Gregory, James F. Phrasing in the speech and reading of the hearing impaired. *Journal of Communication Disorders*, August 1986, *19*, 289-297.

Relates degree of speech phrasality and reading comprehension for 21 hearing impaired students, ages 9-11 to 16-11. Two sets of speech samples were recorded for each subject, one from a spontaneous dialogue and the other, an excerpt from an oral reading selection. Speech samples were rated on a 5-point scale for degree of staccato versus phrasal quality. Passages from the *Gray Oral Reading Tests* were typed in four formats (whole sentences, meaningful phrases, non-meaningful or fragmented word groups, and single words); each child read a passage in each format at a grade level appropriate for him/her, and answered seven comprehension questions. Four answer types were possible: (1) recall, child gives correct response; (2) correct recognition-no recall, child unable to recall but selects from among three multiple-choice items; (3) correct recognition-incorrect original recall; and (4) wrong. A significant positive relation was found between degree of rated speech phrasality and correct recall when passages were read in meaningful phrases but not in the other formats. Implications are discussed.

Hirsh-Pasek, Kathy. The metalinguistics of fingerspelling: An alternate way to increase reading vocabulary in congenitally deaf readers. *Reading Research Quarterly*, Fall 1987, *22*, 455-474.

Cites four experiments with deaf students; in three, the metalinguistic competence of deaf students to segment and manipulate their fingerspelled lexicons is explored, while a fourth utilizes a training task to determine if the use of fingerspelling decoding facilitates word identification. The same 26 students were employed in all experiments, although all 26 were not engaged in each one. Participants included both elementary pupils, ages 5 to 11, and secondary students, ages 13 to 16. The first three experiments tested whether deaf children are capable of recognizing the individual handshapes in fingerspelled words, and whether this metalinguistic ability correlates more with reading ability than with other indices of intelligence. In Experiment 1, participants viewed 20 unfamiliar signed and fingerspelled words which were presented on a video monitor and engaged in a sorting task in which they paired words with an appropriately colored black or red chip. Three phases were involved: instruction, training with feedback, and test. Overall subjects correctly classified signs in 90% of the cases and fingerspelling in 98% of the cases. Thus it was concluded that deaf children can identify and presumably access that subset of their lexicon that can be directly represented in print. The three experiments together provided evidence that deaf children are capable of segmenting fingerspelled words into the discrete handshapes that map onto print; i.e., it was felt that the data indicated that deaf children can attend to the individual handshapes in fingerspelling in much the same way that normal hearing children attend to the phonemes that map onto printed words. Additionally, a positive and significant correlation coefficient was found between a composite segmentation score and grade reading level (r = .61); and the coefficient between the segmentation score and the reading comprehension score on the *Stanford Achievement Test* was .55. Results of Experiment 4 determined that the use of fingerspelling decoding facilitated word identification.

McDONNELL, PATRICK. Communication, language and reading in the education of children with impaired hearing. In *Proceedings of the Eighth Annual Conference of the Reading Association of Ireland*, 1983, 197-210.

Reviews research and other literature on various aspects of the education of hearing impaired children. Four main topics are discussed. In the first section, the author deals with the reading achievement of pupils with profoundly impaired hearing. A second section briefly accounts methods of communication employed in teaching hearing impaired children. In the third section, the complex sociolinguistic environment of special schools is described. The paper ends with suggestions for ways in which the performance of hearing impaired children might be improved.

VI-3 Mentally retarded

HOOGEVEEN, FRANS R.; SMEETS, PAUL M.; & VAN DER HOUVEN, JOSETTE E. Establishing letter-sound correspondences in children classified as trainable mentally retarded. *Education and Training in Mental Retardation*, June 1987, *22*, 77-84.

Assesses the efficacy of an action mnemonic procedure for teaching letter-sound correspondences to children classified as trainable mentally retarded. Subjects were seven children, ages 10.2 to 19.8, who were attending a special school for individuals classified as trainable mentally retarded. Their Stanford-Binet IQs ranged from 27-43. Sessions with children were conducted once or twice daily for 20 minutes four or five days a week. Subjects were trained on four sets of three graphemes using a modified multiple-probe technique. Training of each set was in two phases. In Phase 1, subjects were trained to emit the appropriate phonemes in the presence of pictures incorporating the target letter. Phase 2 was aimed at shifting the control from pictures to the graphemes through prompt-fading. All children learned the letter-sound correspondences without making many errors and maintained most of it over a period of 100 days.

HOOGEVEEN, FRANS R., & SMEETS, PAUL M. Establishing phoneme blending in trainable mentally retarded children. *Remedial and Special Education*, March-April 1988, *9*, 46-53.

Investigates the efficacy of a program designed to teach trainable mentally retarded children to blend phonemes and read words consisting of letters whose phonemes had already been learned. Seven trainable children, ages 8.8 to 17.9, with Stanford-Binet IQs between 30 and 51 served as subjects. The children were in a school for trainable mentally retarded in Holland. Sessions were held once daily, three or four days a week, for about 20 minutes. The program consisted of a series of eight steps with the first six steps designed to establish blending skills in the presence of verbal stimuli. The last two steps were designed to establish blending responses in the presence of two- and three-letter words. A multiple-probe technique was used for each subject. All participants completed the program successfully. Data revealed that blending of words and of syllables is easier than blending of phonemes.

WOOD, JAMES R.A. Morphology and reading comprehension in young moderately learning disabled pupils. *Research in Education*, November 1985, No.34, 79-88.

Examines the relation between reading comprehension and morphological development in learning disabled children. Subjects were 38 British children with IQs between 50 and 65 and ranging in age from 7 to 11 years old. The following tests were administered: EPBT Form 2, *Wug* test, a test similar to the *Wug* test but using words from the school's reading scheme, and the accuracy and comprehension subtests of the *Neale Analysis of Reading Ability*. No significant association was found between inflection ability and reading comprehension.

BAUMGART, DIANE, & VANWALLEGHEM, JOHN. Teaching sight words: A comparison between computer-assisted and teacher-taught methods. *Education and Training in Mental Retardation*, March 1987, *27*, 56-65.

Compares the use of a microcomputer with a speech synthesizer (CAI) to teacher taught instruction (TTI) in teaching functional sight words to three moderately retarded adults. Fifteen grocery-related words were taught in groups of five under each condition. The set of five words were considered mastered when there was 75% to 100% accuracy in recognizing them during two consecutive drill probes. Instructional sessions were conducted twice weekly for 45 minutes for each learner. All three learners mastered TTI words and two learners mastered CAI words.

BUCKLEY, SUE. Teaching parents to teach reading to teach language: A project with Down's syndrome children and their parents. In Keith Topping, & Sheila Wolfendale (Eds.) *Parental Involvement in Children's Reading*. New York: Nichols Publishing Co., 1985, 270-283.

Describes a project involving 11 Down's syndrome children in which their parents were helped to teach language and reading to the children. Parents were encouraged to select both words common in children's early speech and those their youngster was interested in. Of the 11 children, two read words from flashcards at ages 2-7 and 3-0. Five children showed reading skills equal to or better than those expected in a normal sample of children in the same age range.

COSSU, G., & MARSHALL, J.C. Dissociation between reading and written spelling in two Italian children: Dyslexia without dysgraphia? *Neuropsychologia*, 1985, *23*(5), 697-700.

Tests the reading and writing to dictation skills of two mentally retarded Italian boys, ages 10 and 11. Full Scale WISC IQs were 75 for the 10-year-old and 47 for the 11-year-old. Each was asked to: (1) read and write to dictation 21 letters of the Italian alphabet; (2) read and write 42 picturable words along with legal nonwords constructed by changing two letters of the original; and (3) read and write to dictation a set of 64 words and legal nonwords constructed from them. For both boys, spelling was considerably superior to reading.

LORENZ, STEPHANIE; SLOPER, TRICIA; & CUNNINGHAM, CLIFF. Reading and Down's syndrome. *British Journal of Special Education*, June 1985, *12*, 65-67.

Examines the reading skills of 115 Down's syndrome children, ages 5 to 7. Of the total, 58 had received some form of home-based instruction prior to age two. In the group as a whole, 47% of 5 year olds, 63% of 6 year olds, and 75% of 7 year olds could read their own names; for the same age levels, respectively, 19%, 32%, and 44% could read 5 to 10 words. Reading level correlated .78 with mental age.

VI-4 Neurologically impaired/brain damaged

OBRZUT, JOHN E., & HYND, GEORGE W. Cognitive dysfunction and psychoeducational assessment in individuals with acquired brain injury. *Journal of Learning Disabilities*, December 1987, *20*, 596-602.

Reviews the literature relative to the effects of head injury in children, with particular focus on the issue of appropriate assessment practices with individuals who have acquired brain injury and who may have difficulties in learning that are similar to those of the learning disabled child. Topics discussed include the relation of motor and cognitive deficits in children with acquired brain injury, the effects of brain injury on motor and cognitive skills, the effects of neuropsychological deficits in learning disabled children, neuropsychological profiles of common learning and behavior problems, and neuropsychological deficits in reading profiles. The authors conclude that children and adolescents with learning and behavioral problems as a result of head injuries share some problems with children who experience learning disabilities. Motor and cognitive deficits in children with learning disabilities parallel those found in children with acquired brain injury. Additionally, there are similarities in the neuropsychological profiles, particularly in reading profiles between the two groups.

DORMAN, CASEY. Reading disability subtypes in neurologically-impaired students. *Annals of Dyslexia*, 1987, *37*, 166-188.

Reports three studies to determine whether reading disability subtypes identified in other research were present in neurologically-impaired children with and without reading disabilities. Fifty children, ages 11-19, all with diagnosed neurological disorders, and selected from the inpatient and outpatient population of a hospital and school for orthopedically-handicapped served as the sample. All had either a Verbal or Performance WISC-R IQ above 70. Half were determined to be reading disabled and half not disabled on the basis of *Wide Range Achievement Test* and WISC-R scores. In Study I, subjects were given a battery of cognitive measures to see if they could be classified into the three major reading disability subtypes identified by a previous researcher: Anomic-Language Disorder, Articulatory-Graphomotor Dyscoordination, and Visual-Spatial Perceptual Disorder. Although more reading disabled than non-reading-disabled subjects could be classified into the three subtypes, more than half the non-reading-disabled met the criteria for the subtypes. In Study II, subjects were administered the *Boder Test of Reading-Spelling Patterns* to see if they could be classified as dysphonetic, dyseidetic, and mixed dysphonetic-dyseidetic subtypes. The dysphonetic and mixed patterns occurred almost exclusively among reading-disabled subjects while the dyseidetic pattern occurred equally in both groups. In Study III, yet another subtype classification scheme was employed. Subjects were given the *Doehring Rapid Reading Battery* to assess accuracy and speed of three reading activities. Three of four subtypes found by previous research were identified in the reading-disabled group but were not evident in the non-reading-disabled children.

Blanton, Paul Dorman, & Gouvier, William Drew. Sex differences in visual information processing following right cerebrovascular accidents. *Neuropsychologia*, 1987, *25*(4), 713-717.

Examines whether 10 male and 10 female adults who had sustained right cerebrovascular accidents (VCAs) but did not demonstrate gross asymmetries in processing left- and right-sided visual information would demonstrate visual hemiimperception when tested with more demanding procedures. Subjects, all in-patients at a rehabilitation center, were administered the following tasks: reaction time, *Wide Range Achievement Test* in reading, and searching for embedded words and figures. Males took longer to locate stimuli in the left hemispace when searching for embedded stimuli; females showed no such pattern of results.

Koegel, Lynn Kern, & Koegel, Robert L. The effects of interspersed maintenance tasks on academic performance in a severe childhood stroke victim. *Journal of Applied Behavior Analysis*, Winter 1986, *19*, 425-430.

Assesses the effects of a constant acquisition task condition versus a condition that interspersed maintenance trials among acquisition trials on the motivation and academic performance of an eight-year-old severe stroke victim. At the time of the study, the boy was in a special education class. Prior to the stroke, his IQ was 122 on the *Otis-Lennon Test of Mental Ability*; a year following the stroke, he had a WISC-R full scale IQ of 69. Memory, spelling, word-finding, and reading were assessed prior to the experiment. During the acquisition only trials condition, target task trials were presented successively for 15 minutes for each of the four areas; for the acquisition with interspersed maintenance condition, procedures were identical to the acquisition only trials condition except that no more than two acquisition trials were presented consecutively. Rather, acquisition trials were interspersed with the same number of maintenance trials. Sessions were conducted twice weekly for eight weeks. Improvement in all academic areas always and only occurred following the interspersal of maintenance trials with acquisition tasks. Results also suggested improvement in motivation.

Moscovitch, Morris; Winocur, Gordon, & McLachlan, Don. Memory as assessed by recognition and reading time in normal and memory-impaired people with Alzheimer's disease and other neurological disorders. *Journal of Experimental Psychology: General*, December 1986, *115*, 331-347.

Reports three experiments examining the dissociations in performance on recognition and reading time in young adults, home-dwelling and institutionalized elderly adults, and adults with severe memory disorders. Subjects for Experiment 1 were 14 undergraduates; 14 community-dwelling elderly (mean age = 68.2); 10 institutionalized elderly (mean age = 78.6); and 8 individuals with memory disorders, all community dwelling (mean age = 55.3). Participants in Experiments 2 and 3 were, respectively, 12 and 12 normal elderly, 12 and 12 undergraduates, and 8 and 12 memory-disordered adults. In Experiment 1, the task was to read sentences in normal and geometrically transformed script at initial presentation, 1-2 hours later, and 4-14 days later. At the latter two times, subjects were asked to distinguish previously read sentences from new ones. Young and elderly in general could distinguish old from new at the short delay, and all but the institutionalized elderly could do so at the long delay. Items that were recognized best were read most quickly. Dissassociation between tests of retention was found only in the memory disorders group who could not distinguish old from new items even at short delays. However, even for that group, old sentences were read more quickly. All three experiments suggested that on implicit tests of memory, individuals with memory disorders can be shown to have formed and retained new associations despite failing on explicit tests such as recognition.

Dorman, Casey. Verbal, perceptual and intellectual factors associated with reading achievement in adolescents with cerebral palsy. *Perceptual and Motor Skills*, April 1987, *64*, 671-678.

Examines the relation between various congitive skills and reading in a sample of 31 adolescents with cerebral palsy. Mean age of the children was 16 years, and all attended a special school for the orthopedically handicapped. A battery of tests was administered, including the following: WISC-R or WAIS, items from the *Luria-Nebraska Neuropsychological Battery*, the Reading subtest of the *Wide Range Achievement Test* (WRAT), and the Reading Comprehension subtest of the *Peabody Individual Achievement Test* (PIAT). The WISC-R/WAIS and Luria-Nebraska scales were used to form measures of verbal production, speech perception, nonverbal auditory perception, visuospatial perception, and verbal intelligence. A step-wise multiple linear regression analysis yielded a two-variable prediction equation consisting of the Rhythm scale from the Luria-Nebraska and Verbal IQ for reading recognition. Only the Rhythm scale was included in the prediction for reading comprehension. Subjects were more impaired in visuospatial percention than in other cognitive abilities.

Murdoch, Bruce E.; Chenery, Helen J.; Wilks, Vicki; & Boyle, Richard S. Language disorders in dementia of the Alzheimer type. *Brain and Language*, May 1987, *31*, 122-137.

Documents the linguistic profile of a group of 18 Alzheimer patients using a standardized aphasia test battery and compares their performance with a group of institutionalized, nonneurologically impaired control subjects matched for age, sex and educational level. Subjects ranged in age from 67 to 91 years old. Language performance was assessed by means of a test battery consisting of the *Neurosensory Centre Comprehensive Examination of Aphasia* (NCCEA) which is comprised of 20 language tests assessing understanding and production of language, retention of verbal material, reading, and writing. Additionally, the fluency subtest of the *Western Aphasia Battery* was given. Alzheimer patients scored considerably lower than the controls in the areas of verbal expression, auditory comprehension, repetition, reading, and writing. Articulation abilities were the same in each group. A language deficit was evident in all Alzheimer patients. The language disorder resembled a transcortical sensory aphasia. Syntax and phonology remained intact to a large extent, but semantic abilities were impaired. The authors conclude that the inclusion of a language deficit as a diagnostic criterion of Alzheimer's disease is warranted.

Patterson, K.E.; Marshall, J.C.; & Coltheart, M. (Eds.) *Surface Dyslexia: Neuropsychological and Cognitive studies of Phonological Reading*. Hillsdale, NJ: Lawrence Erlbaum Associates Ltd., 1985.

Divides the book into six major parts, with each section containing case studies representative of different types and theories of surface dyslexia. The sections found are: Part I: Case Studies of Acquired Surface Dyslexia; Part II: Comprehension in Surface Dyslexia; Part III: Surface Dyslexia in Various Orthographies; Part IV: Surface Dyslexia and the Development of Reading; and Part V: Modelling the Pronunciation of Print. In the last section, Part VI, nine CT scans of seven cases presented in the book are shown and reported upon along with diagrams indicating the extent of the lesion.

Lecours, André Roch; Mehler, Jacques; Parente, Maria Alice; Aguiar, Luis Roberto; da Silva, Amauri Batista; Caetano, Manoel; Camarotti, Henriqueta; Castro, Maria Julia; Dehaut, François; Dumais, Claude; Gauthier, Louise; Gurd, Jennifer; Leitao, Orlando; Maciel, Jayme;

Machado, Sergio; Melaragno, Roberto; Oliveira, Leda Maria; Paciornik, Jaime; Sanvito, Wilson; da Silva, Ermelinda Santos; Silifrandi, Maria; & Torné, Carmen Hierro. Illiteracy and brain damage. 2. Manifestations of unilateral neglect in testing auditory comprehension: with iconographic materials. *Brain and Cognition*, July 1987, *6*, 243-265.

Concerns itself with the sentence-picture matching behavior of 99 left-brained damaged, 70 right-brain damaged, and 100 neurologically healthy adults. All were unilingual and right handed; 144 were illiterates and 125 had received schooling and had retained writing skills and reading habits. Subjects were given an aphasia screening battery which included a set of six sentence-picture matching stimuli. The task was to match the sentence read by the examiner with one of four drawings presented within a single display divided into four quadrants of equal surface. Three sentences were syntactically simple and three, more complex. Evidence of unilateral neglect was discovered in both right- and left-brain damaged subjects. The right neglect of left-brain-damaged subjects was manifested primarily when target sentences were complex, but the left neglect of right-brain-damaged subjects was manifested regardless of the syntactic complexity of target sentences.

Rapcsak, Steven Z.; Rothi, Leslie J. Gonzalez; & Heilman, Kenneth M. Phonological alexia with optic and tactile anomia: A neuropsychological and anatomical study. *Brain and Language*, May 1987, *31*, 109-121.

Reports the case of a 39 year old right-handed male with phonological alexia caused by a small hemorrhage in the posterior-inferior portion of the left temporal lobe. The patient's spontaneous speech and verbal comprehension were normal. His only oral language deficit was an anomia for objects presented in the visual and tactile modalities. The lesion had induced a highly selective impairment of phonological reading without concomitant oral language deficits other than anomia for objects presented in the visual and tactile modalities. The authors suggest that an intact dorsal pathway from inferior visual association areas to Wernicke's area via the angular gyrus could mediate reading by the lexical route, while damage to a ventral pathway disrupted the patient's ability to read nonwords. Additionally, it is contended that although visually and tactually presented objects could be recognized and both verbally and nonverbally identified, they could not be named because of a disconnection from the area of word representations.

Kawahata, Nobuya; Nagata, Ken; & Shishido, Fumio. Alexia with agraphia due to the left posterior inferior temporal lobe lesion – neuropsychological analysis and its pathogenetic mechanisms. *Brain and Language*, March 1988, *33*, 296-310.

Reports three cases of alexia with agraphia due to the left posterior inferior temporal lesions. All three were native Japanese males in their 60s. Subjects were tested in both Kanji and Kana systems. For the first case, it was found that the reading disability was more prominent in Kana than in using Kanji. For Cases 2 and 3, however, the reading disability was more prominent in the use of Kanji. In spontaneous writing and dictation, the disability was more pronounced in the use of Kanji than in the use of Kana. All three patients showed a localized lesion in the lower part of the left posterior temporal lobe. the authors discuss the neuropsychological analysis and pathogenetic mechanisms of alexia with agraphia due to the left posterior inferior temporal lesion in the comparison of alexia with agraphia caused by the left angular lesion.

Baddeley, Alan; Vallar, Giuseppe; & Wilson, Barbara. Sentence comprehension and phonological memory: Some neuropsychological evidence. In Max-Coltheart (Ed.) *Attention and Performance XII: The Psychology of Reading*. Hillsdale: Lawrence Erlbaum Associates, 1987, 509-529.

Tackles the question of the role of the articulatory loop in comprehension by studying two patients who showed severely reduced immediate memory span following brain damage.

Both individuals comprehended individual words and short sentences, but both had difficulty with comprehension of longer and more difficult sentences. The authors present evidence to indicate that the effect of sentence length is not attributable to syntactic processing problems. They suggest that the phonological storage component of the articulatory loop acts as a mnemonic window which aids comprehension by storing and maintaining the order of the sequences of words comprising the incoming text.

Katz, Robert B., & Sevush, Steven. Accurate reading by nonlexical means: A case study. *Brain and Language*, July 1987, *31*, 252-266.

Describes a patient with acquired dyslexia due to impaired lexical reading mechanisms. The patient, a 56 year old male, was examined two years following a stroke. His reading was slow and marred by occasional errors. He complained of a comprehension problem for long sentences. His reading grade level was 10.5 on the *Wide Range Achievement Test*, with most of his errors occurring on the longer, less frequent words. Additional testing on six word lists was given. More errors occurred on irregular words, but he read both regular and irregular words with a high degree of accuracy. He showed poor performance on a lexical decision task and an inability to define homophones. Two tests were developed and administered which circumvented the use of his speaking vocabulary to check responses. The first test required the patient to read words with competing pronunciations. He was poor at reading these words. The second test called for reading a set of words embedded in a list of nonwords. He read regular words well but not irregular words. It is felt that the results demonstrated that relatively accurate reading of irregular words is possible despite damage to lexical mechanisms and that this can be achieved by filtering responses through the speaking vocabulary.

Sugishita, Morihiro, & Yoshioka, Masumi. Visual processes in a hemialexic patient with posterior callosal section. *Neuropsychologia*, 1987, *25*(2), 329-339.

Discusses, in a case study, the reading abilities of a 22 year old male studied 9-13 years after an operation in which he underwent transection of the splenium for removal of a germinoma by the right occipital route. The right occipital lobe was retracted during the operation. Nine to 13 years post-operatively, neurological examination was within normal limits. Scores on the WAIS were normal. Three test conditions were performed: reading aloud, reading comprehension (word to picture matching), and word matching. His reading aloud, reading comprehension, and word matching abilities were disturbed only in the left hemifield; the three were equally disturbed. Ideogram words were less disturbed than phonogram words in reading aloud and reading comprehension; picture-naming was not disturbed in either hemifield. Compared with earlier results on the patient, his reading abilities had recovered.

Roeltgen, David P. Loss of deep dyslexic reading ability from a second left-hemispheric lesion. *Archives of Neurology*, March 1987, *44*, 346-348.

Reports a case of a 54-year-old male who was deep dyslexic following an initial left hemispheric stroke. The patient then sustained a second left hemispheric stroke and lost most of his residual reading ability. Previously he had read a list of highly imageable nouns with 100% accuracy and function words with 90% accuracy. After the second stroke he now read with only 5% and 0% accuracy, respectively. Comprehension suffered similarly. Deep dyslexic reading abilities were dependent upon left hemispheric structures.

Bub, Daniel N.; Black, Sandra; Hampson, Elizabeth; & Kertesz, Andrew. Semantic encoding of pictures and words: Some neuropsychological observations. *Cognitive Neuropsychology*, 1988, *5*(1), 27-66.

Offers a case study of a 65-year-old female whose comprehension of written and spoken words was severely impaired as a result of an automobile accident. In general, the patient was able only to determine the superordinate category of a word and was unable to obtain a more precise description. However, her understanding of pictures was more detailed. Further investigation revealed definite constraints upon the nature of the semantic description which the patient could extract from pictures. The subject had access to knowledge of the basic-level concept for a picture, but seemed unable to go beyond that level to compute subordinate information. The results are discussed in terms of possible differences in the way pictures and words are normally processed for meaning.

BARBUT, DENISE, & GAZZANIGA, MICHAEL S. Disturbances in conceptual space involving language and speech. *Brain*, December 1987, *110*, 1487-1496.

Reports a case study of a 71 year old male with a CT-verified low density lesion in the right parietal area, who exhibited deficits in left conceptual space and also in reading, writing, and the production of speech that related in a systematic manner to a left hemispatial neglect. In early testing, a confounding dysphasia clouded the picture as the patient was left handed. This later cleared. On the third day following admission, he was asked to read 68 words. He managed two- and three-letter words with little problem, but made 23% errors on words longer than three letters. Mistakes were made at the beginnings of words and consisted of omissions and substitutions. On the fourth day, he made errors on half of 10 words, 9-12 letters long, presented to him. On days 5 to 7, the error rate dropped markedly on words presented to him, but all errors occurred in the leftmost letters of words longer than three letters. In spelling, writing, and spontaneous speech, too, errors tended to be omissions or substitutions of beginnings of words. The problem could be remedied when the patient was instructed to do such things as spelling the word backwards. Results were consistent with the idea that some aspects of language processing involve spatial mechanisms.

BADECKER, WILLIAM & CARAMAZZA, ALFONSO. The analysis of morphological errors in a case of acquired dyslexia. *Brain and Language*, November 1987, *32*, 278-305.

Analyzes the morphological errors of one 43 year old, right-handed male who suffered a large/middle cerebral artery infarct which left him with moderate right hemiparesis and language impairments. The case study was done four years postonset. His reading was analyzed in a previously published report. This study emphasizes the patient's processing of morphologically complex words. In addition to morphological errors, the subject's responses included those attributable to separate visual and noninput lexical processing deficits. His visual errors tended to be more concrete than the stimulus word. Almost all of the morphological errors made were inflectional substitutions. Despite this, the authors argue that a morphological processing deficit cannot be demonstrated when various issues are addressed in the context of a sufficiently elaborated theory of lexical processing. Previous research is critiqued, and it is felt that they fail to support claims for a morphological processing deficit. The authors further note that in order to make valid inferences concerning the role of morphology in organizing the lexicon, it is necessary to consider these errors in the context of theories of the lexicon that take seriously the effects of converging lexical factors in processing.

CHIARELLO, CHRISTINE, & CHURCH, KATHERINE L. Lexical judgements after right- or left-hemisphere injury. *Neuropsychologia*, 1986, *24*(5), 623-630.

Examines lexical similarity judgements in 24 unilaterally lesioned stroke patients, 12 sustaining left-hemisphere injury (LHI), and 12 right-hemisphere injury (RHI). A control group of 12 right-handed, neurologically normal adults was included. Subjects were required to make similarity judgements to visually presented words on the basis of rhyme, meaning, or visual similarity. The LHI group was significantly impaired relative to controls for all lexical judgements, with the greatest impairment in the rhyme condition. RHI patients were also impaired, but only when lexical judgements were based on meaning. It is felt that results are consistent with normal and split-brain lateralization findings and give support to a right-hemispheric contribution to some aspects of lexical semantic processing.

Nicholas, L.D.; MacLennan, D.L.; & Brookshire, R.H. Validity of multiple-sentence reading comprehension tests for aphasic adults. *Journal of Speech and Hearing Disorders*, February 1986, *51*, 82-87.

Assesses the passage dependency of multiple-sentence reading test items from the *Boston Diagnostic Aphasia Examination (BDAE), the Minnesota Test for Differential Diagnosis of Aphasia* (MtDDA), *Examining for Aphasia* (EFA), the *Reading Comprehension Battery for Aphasia* (RCBA), and the *Western Aphasia Battery* (WAB). Subjects were 12 aphasic adults and 12 non-brain damaged adults. Stimulus materials were taken from the multiple-sentence reading comprehension subtests of the five aphasia batteries. Test items from each reading subtest were presented in two conditions: (1) without passage condition, and (2) with passage condition. More than half the items from the BDAE, EFA, the RCBA, and the WAB were answered correctly at greater than chance levels by both groups in the without passage condition. Aphasics responded at greater-than-cahnce levels on 58% of the test items, while non-brain-damaged individuals responded at greater-than-chance levels on 64% of the test items.

VI-5 Other atypical learners

Welsh, Marilyn C.; Pennington, Bruce F.; & Rogers, Sally. Word recognition and comprehension skills in hyperlexic children. *Brain and Language*. September 1987, *32*, 76-96.

Evaluates the word recognition and reading comprehension abilities of five hyperlexic boys, ages 4-5 to 10-1, who had been diagnosed with infantile autism or pervasive developmental delay in early childhood. The *Peabody Individual Achievement Test*, Reading Recognition subtest, was administered as a measure of oral word recognition, and the WISC-R and/or WPPSI constituted a measure of general intelligence. Additionally, administered instruments included the *Coltheart Regular-Irregular Word List*, the *Peabody Picture Vocabulary Test*, the *Woodcock Word Attack Non-word Reading*, and the *Boston Naming Test*. The Peabody was given in both a standard oral and a nonstandard written format. Full Scale IQs ranged from 52 to 119. All five boys tested as precocious in single-word reading. The phonological route to reading appeared to be preferred to the lexical route. They did not have poor reading comprehension for single words, and they appeared to resemble surface dyslexics.

Conboy, Thomas J.; Pass, Robert F.; Stagno, Sergio; Britt, William J.; Alford, Charles A.; McFarland, Carl E.; & Boll, Thomas J. Intellectual development in school-aged children with asymptomatic congential cytomegalovirus infection. *Pediatrics*, June 1986, *77*, 801-806.

Follows up 18 normally hearing, school-aged children who had been identified at birth as infected with cytomegalovirus and compares their intellectual development with 18 controls. Subjects were matched for age, sex, race, school grade, and socioeconomic status. Administered were the WISC-R; the *Kaufman Assessment Battery for Children*; and the reading, spelling, and arithmetic scales of the *Wide Range Achievement Test*. One-way multivariate analysis of variance was used in analyzing data. No significant differences were found between groups on any of the measures. Mean scores for both groups were close to national norms.

Zentall, Sydney S., & Meyer, Martha J. Self-regulation of stimulation for ADD-H children during reading and vigilance task performance. *Journal of Abnormal Child Psychology*, December 1987, *15*, 519-536.

Hypothesizes that tasks requiring or allowing for task-related motor responses would modulate the excessive levels of activity and impulsive errors of hyperactive children. Subjects were 22 attention-deficit-disordered children with hyperactivity (ADD-H) as determined by scores on the activity, attention, and impulsivity scales of a checklist index of ADD-H and the Abbreviated Teacher Rating Scale. Chilren ranged in age from 6 to 12 years and came from two parochial schools and a special school for the behavior disordered. In addition, there were 25 comparison children from the same classrooms. Children were given: (1) an auditory repetitive task in two conditions, low stimulation passive-response (LS-P) and high stimulation active-response (HS-A); and (2) a word recognition task also in LS-P and HS-A conditions. Random assignment was made to task order, stimulation order, difficulty order, and form order. An actometer, attached to the nondominant wrist and ankle, was used as to obtain a measure of activity, and various behaviors were recorded. For reading, the number of words attempted, the number read correctly, and the percentage correct were tabulated. Impulsive errors, talking/noise-making, and activity of ADD-H children did not differ from the comparison group only in the HS-A conditions. Behavioral improvements for ADD-H children were documented in both tasks in the active condition, but performance gains were found only in the auditory vigilance task.

McGee, Gail G.; Krantz, Patricia J.; & McClannahan, Lynn E. An extension of incidental teaching procedures to reading instruction for autistic children. *Journal of Applied Behavior Analysis*, Summer 1986, *19*, 147-157.

Examines the effects of reading instruction given to two autistic children within the context of play activity. Subjects were a five-year-old female and a 13-year-old male, both diagnosed as autistic. Both were enrolled in a child study institute. Data were collected daily during baseline, prior to each teaching session, and during follow-up 15 and 25 days after the final teaching session. Teaching stimuli consisted of words corresponding to each child's nine preferred toys plus six distractors. Children received daily individualized instruction in the context of a 25-minute play activity. Results indicated that incidental teaching promoted acquisition and retention of sight-words. In addition, subjects demonstrated comprehension on probes requiring reading skills to locate toys stored in labeled boxes.

Journals Monitored for the Annual Summary, 1987 – 1988

Academic Therapy
Action Teacher Education
Adolescence
Adult Education (British NIAE)
Adult Education Quarterly
Alberta Journal of Educational Research
American Annals of the Deaf
American Cartographer
American Educational Research Journal
American Journal of Community Psychology
American Journal of Education
American Journal of Mental Retardation
American Journal of Optometry and
  Psychological Optics
American Journal of Orthopsychiatry
American Journal of Psychology
American Journal of Sociology
American Psychologist
American Quarterly
American Sociological Review
Applied Ergonomics
Applied Psycholinguistics
Archives of Neurology
Arithmetic Teacher
Arizona English Bulletin
Arizona Reading Journal
Australian Journal of Education
Australian Journal of Psychology
Australian Journal of Reading
Australian Library Journal
Brain: A Journal of Neurology
Brain & Cognition
Brain & Language
British Journal of Disorders of Communication
British Journal of Educational Psychology
British Journal of Educational Studies
British Journal of Educational Technology
British Journal of Psychology
British Journal of Sociology of Education
British Journal of Special Education
Bulletin of the Psychonomic Society
California Reader
Canadian and International Education
Canadian Journal for Exceptional Children
Canadian Journal of Behavioral Science
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Canadian Modern Language Review
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Communication Research
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Communication A.C.M.
Community Junior College
Comparative Education Review
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Contemporary Psychology
Cortex
CSIL: Current Studies in Librarianship
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Early Childhood Research Quarterly
Education
Education and Society
Education and Training in Mental Retardation
Education Digest
Education for Information
Education Libraries Bulletin
Education, U.S.A.
Educational and Psychological Measurement
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Educational Communication and Technology
  Journal
Educational Forum
Educational Gerontology: An International
  Quarterly
Educational Horizons
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Educational Researcher

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Exceptional Child, The
Exceptional Children
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Foreign Language Annals
Forum
Forum for Reading
Gazette: International Journal for Mass Communications Studies
Georgia Journal of Reading
Gifted Child Quarterly
Harvard Educational Review
High School Journal
Higher Education–Amsterdam
History of Education
History of Education Quarterly
Human Development
Human Factors
Idaho Reading Report
Illinois Reading Council Journal
Imagination, Cognition & Personality
Indian Educational Review
Indiana Reading Quarterly
Instructional Science
Intelligence
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International Journal of Educational Research
International Journal of Psycholinguistics
International Journal of Psychology
International Library Review
International Research in Reading
International Review of Education
Interracial Books for Children
Irish Journal of Education
Journal for Affective Reading Education
Journal of Abnormal Child Psychology
Journal of the Acoustical Society of America
Journal of Advertising
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Journal of Aesthetic Education
Journal of American Optometric Association
Journal of Applied Behavior Analysis
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Journal of the Association for the Study of Perception
Journal of Child Psychology and Psychiatry
Journal of Clinical Psychology
Journal of Communication
Journal of Communication Disorders
Journal of Counseling Psychology
Journal of Curriculum Studies
Journal of Education
Journal of Educational Computing Research
Journal of Educational Measurement
Journal of Educational Psychology
Journal of Educational Research
Journal of Experimental Child Psychology
Journal of Experimental Education
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Journal of Experimental Psychology: Human Perception and Performance
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Journal of General Psychology
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Massachusetts Primer
Measurement and Evaluation in Counseling and Development
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Merrill-Palmer Quarterly
Michigan Reading Journal
Minnesota Reading Association Highlights
Mississippi Reading Journal
Missouri Reader
Modern Language Journal
Monographs in Language and Reading Studies
Monographs of the Society for Research in Child Development
Montana Reading Journal
National Association for Secondary School Principals Bulletin
Neuropsychologia
New England Reading Association Journal
New Mexico Journal of Reading
New Zealand Journal of Education Studies
News Research Report
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PLET: Programmed Learning & Educational Technology
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TESOL Quarterly
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